RESEARCH CENTRE FOR ISLAMIC HISTORY ART AND CULTURE
IRCICA

MATHEMATICIANS, ASTRONOMERS, and OTHER SCHOLARS

of

ISLAMIC CIVILIZATION and their works (7^{th} -19^{th} c.)

Boris A. Rosenfeld - Ekmeleddin Ihsanoğlu

SERIES OF STUDIES AND SOURCES ON HISTORY OF SCIENCE: 11
PC: 2003/3
Editor: Ekmeleddin İhsanoğlu
ISBN: 92-9063-127-9

RESEARCH CENTER FOR ISLAMIC HISTORY, ART AND CULTURE (IRCICA)

ADDRESS:
Yıldız Sarayı, Seyir Köşkü
Barbaros Bulvarı,
34 349 - Beşiktaş
İstanbul - Turkey

POSTAL ADDRESS:
P.K. 24,
Beşiktaş 34 354
İstanbul - Turkey

TEL: 00 90 212 259 17 42
FAX: 00 90 212 258 43 65
e-mail: ircica@superonline.com
web-site: http://ircica.org

Cover Design: Hatice Polat
Layout: Acar Tanlak

Printed at: Yıldız Yayıncılık, Reklamcılık, Ticaret ve Sanayi A.Ş., 2003, İstanbul

IRCICA Library Catalogue Information

Rosenfeld, B. A.
Mathematicians, astronomers, and other scholars of Islamic civilization and their works (7th -19th c.) by Rosenfeld B.A. and Ihsanoğlu, Ekmeleddin. – Istanbul: Research Center for Islamic History, Art and Culture, 2003
833p.; 30 cm.- (Series of studies and sources on history of science; 11)
Bibliography: p.759-833
Includes index.
ISBN 92-9063-127-9
1. Scholars, Muslim 2. Mathematicians, Muslim 3. Astronomers, Muslim I. Ihsanoğlu, Ekmeleddin II. Title III. (Series)
509.2

INTRODUCTION

One hundred years ago, in 1900, Swiss historian of mathematics and astronomy, Heinrich Suter, published the bio-bibliographical survey "Mathematicians and Astronomers of Arabs and Their Works" (Mathematiker und Astronomen der Araber und ihre Werke – MAA). Suter's book contained information on scholars not only in the Arab countries but in all the Islamic countries from the 8^{th} to the 17^{th} centuries. MAA contains information on approximately 500 scholars whose time of life was known and 100 with unknown dates.

In 1983 G.P. Matviyevskaya and B.A. Rosenfeld in Moscow published the work "Mathematicians and Astronomers of Medieval Islam and Their Works" (Matematiki i astronomy musul'manskogo srednevekov'ya i ikh trudy – MAMS) in three volumes which comprise 1000 authors whose time of life was known and about 300 authors with unknown dates. These items have the same numbers as in MAA, except those that were newly added.

This work titled *Mathematicians, Astronomers and other Scholars of Islamic Civilization and their Works (7^{th}-19^{th} c.)* is based on earlier publications among which MAMS takes the first place. The data taken from MAMS is enriched with the information taken from numerous publications and other relevant sources. Altogether this book comprises the names of 1423 authors whose time of life is known and 288 scholars whose time of life is unknown. As will be seen, new names that were not in the above-mentioned reference books are added to the list, while some others who were among unknown authors, were identified and included in the list of known authors.

The present work contains English translations of all the material in MAMS with numerous additions, corrections and elaborations. Thus, G.F. Matvievskaya's contribution to the present work is very substantial since the relationship between MAMS and the present work is similar to the relationship between Suter's MAA and MAMS. This work also includes new material based on other sources which are listed below. The following are among the most important reference books that appeared in the last twenty years and they are extensively used in this work.

"A Catalogue of the Scientific manuscripts in the Egyptian National Library" (Fihris al-Makhṭūṭāt al-'ilmiyya al-mahfūza bi-Dār al-kutub al-Misrıyya – FMI), "A Survey of the Scientific Manuscripts in the Egyptian National Library" (SSM), and "Mathematical Astronomy in Medieval Yemen" (MAY) of D.A. King that were published in 1981, 1983 and 1986 respectively.

"Science and Technology in Medieval India. A Bio-bibliographical Source Material in Sanskrit, Arabic and Persian" (STMI) of Abdur Rahman, M.A.Alvi, S.A.Khan Ghori and K.V.Samba Murthy that came out in 1982.

"Arabic Manuscripts of the Institute of Oriental Studies of the Academy of Sciences of the USSR" (Arabskiye rukopisi Instituta Vostokovedeniya Akademii nauk SSSR – ARIV) - the catalogue of Arabic manuscripts in the St.Petersburg branch of the Institute of Oriental Studies of the Russian Academy of Sciences that came out in 1986.

"Encyclopaedia of History of Arabic Science" (EHAS) edited by Rushdi Rashed and published in 1996.

The works that brought new life to this field are the scientific literature surveys which are edited by E. Ihsanoğlu under the series of "History of Ottoman Scientific Literature" and published by Research Centre for Islamic History, Art and Culture (IRCICA) in Istanbul. These are: "History of Astronomy Literature During the Ottoman Period" (Osmanlı Astronomi Literatürü Tarihi - OALT) 2 vols; "History of Mathematical Literature During the Ottoman Period" (Osmanlı Matematik Literatürü Tarihi – OMLT) 2 vols; and "History of Geographical Literature During the Ottoman Period" (Osmanlı Coğrafya Literatürü Tarihi – OCLT) 2 vols., and "History of Music Literature During the Ottoman Period" (Osmanlı Müzik Literatürü Tarihi - OMULT) published in 1997, 1999, 2000 and 2003 respectively. These four books comprise surveys of astronomical, mathematical, geographical and musical works of scholars in Turkey and in all the provinces of the Ottoman Empire, stretching from Europe, Asia Minor, the Middle East to North Africa. Alltogether they contain a total of 1588 names from 15^{th} to 20^{th} centuries.

Historians of science frequently discover and investigate new manuscripts which lead them to new researches and publications about the works of the scholars of Medieval Islam. Researches in the history of mathematics

and astronomy of Medieval Islam were published by numerous scholars, the most recent and important being the works of F.M.Sezgin, E.S.Kennedy, R.Rashed , A.I.Sabra and J.P.Hogendijk.

The aim of this book is to provide bio-bibliographical information on mathematicians, astronomers, geographers and other scholars of Islamic civilization who lived in Asia, Africa and Europe from the beginning of Islam in the 7th century to the 19th century. During this time, the countries that these scholars lived in were united by Islamic religion and civilization, with Arabic as the common language of science.

The science in these countries had absorbed the sciences of the ancient civilizations in the region, namely Egyptian, Babylonian, Hellenistic and Indian, pre-Islamic Persian and Central Asian. This science was also closely connected with the sciences of China and Western Europe. Scholars of Medieval Islam assimilated the legacy of their forerunners, brilliantly combined the practical tendencies of the sciences of the ancient East with the deep theoretical achievements of the Greek and Hellenistic scholars. The scholars of Medieval Islam created the important branches of mathematics such as algebra and trigonometry and significantly enriched computational methods and geometric constructions. Astronomy, mathematical geography, mechanics, optics, and the theory of music were also considerably developed in the works of those scholars in close interaction with mathematics.

This book, like MAA, MAMS, OALT, OMLT, OCLT and OMULT, is the tool which will help researchers orient themselves with the mass of these manuscripts and reference works. Among these works are: "Geschichte der arabischen Literatur - GAL" of Carl Brockelmann published in 1898-1902 and 1937-1949; "Introduction to History of Science (HIS)" by George Sarton published in 1927-1948; "Persian Literature: A Bio-bibliographical Survey (PL)" of Charles Ambrose Storey published in 1958-1990 and "Ottoman Authors" (Osmanlı Müellifleri – OM) by Mehmed Tahir Bursalı published in 1909-1915 and 1971-1972. GAL was continued by Fuat Sezgin in his "History of Arabic Scripture" (Geschichte des arabischen Schrifttums – GAS) that was published in many volumes since.

The main part of this book contains items on scholars whose time of life is known. These items are arranged according to the years of their death and numbered accordingly. Since it was not possible to mention all the works belonging to some of the authors, a selective list is given here. The reader/researcher is directed to the above-mentioned reference books to find the complete list of works belonging to some of these authors.

Each item contains a short biographical description of the author, a list of his works and manuscripts; the library call-number, translations, researches and different editions of each work. For non-extant manuscripts, the reader is directed to the source that has information on these works. The items on mathematical and astronomical works are indicated with the letters (M) and (A) respectively, works on mechanics (Me), physics (Ph), music (Mu), mathematical geography (G), meteorology (Mt), encyclopaedias (E) and works on history of science (HS). Other works are indicated as: philosophy and theology (PH), medicine (ME), descriptive geography (G), chemistry and alchemistry (Ch), mineralogy and geology (Mi), zoology (Z), botany (B), literature and linguistics (L) and mysticism (My). The very long titles of the most important works are shortened to "Geography", "Chronology", "Geodesy", "Cartography", "Astrolabes", "Chords", "Spherics", "Shadows", etc.

For works in Arabic, the language is not indicated, whereas the letter (P) is used to signify works in Persian and Tajiki; (T) for works in Turkish, Tatar, Uzbek, and other Turcic languages; (Sy, Sk and U) for Syriac, Sanskrit and Urdu respectively. In addition to their Arabic transcription, the names of scholars of Turkish origin are given in parentheses and written in modern Turkish orthography as in OALT, OMLT, OCLT and OMULT, e.g. Qirlānghij-Zāda (Kırlangıç-zade), Qādîzāda (Kadı-zade).

There are two supplements arranged in alphabetical order, the first of which contains the list and information on scholars whose time of life is unknown (here the item numbers begin with "01"); the second supplement comprises the list of anonymous manuscripts that exist in libraries which are registered under various countries all over the world.

At the end of the book there are two indexes; the first comprising names of authors and the second titles of works. If an author is known by different names, including the name he is commonly known in Ottoman literature, all of them are included in the index.

In the index of work titles, the words *kitāb* (book, work), *maqāla* (article), *qawl* (reasoning) and *risāla* (treatise, letter) are denoted by their first letters K, M, Q, R and prepositions *fī* and *dar* (on) are not taken into consideration, since in the variations of the titles they may be omitted or replaced by another preposition. As

much as possible, the Arabic titles are translated into English in a coherent and harmonious way so as not to lose their poetical connotations, however it does not mean that they conform to the style of the English language or the readers' taste. References to the books and papers are indicated by the figures in brackets or by abbreviations for the most important reference books, encyclopaedias, and catalogues.

In the preparation of this book, an important role was played by Lucy Rosenfeld, who provided the English transcription of the considerable part of MAMS. We acknowledge the assistance of Prof. Svetlana Katok, Dr. Moisey Guysinskiy and Dr. Sergey Yaskolko of Pennsylvania State University in the preparation of Exp version of this book.

We also acknowledge the contribution of Prof. Ramazan Şeşen as consultant and Prof. A. Djebbar for his useful suggestions after reading the first draft of the manuscript; then IRCICA staff members, among them M.Serdar Bekar who contributed the compilations of new biographies; Dilek Orbay for editing the manuscript and undertaking the secretarial work; Kishimjan Eshenkulova for assisting in the editing and researches, and Gülcan Gündüz for general research and finally Acar Tanlak who undertook the technical adaptation of the computer program and arranged the layout of the book.

CONTENTS

Introduction 3
Contents 7
Abbreviations of reference books, journals, dictionaries and encyclopaedias.. 9
Mathematicians, Astronomers & Scholars whose time of Life is Known.... 13
Mathematicians, Astronomers & Scholars whose time of Life is Unknown 421
Anonymous Works 451
Manuscript Libraries 499
Surveys 513
References 517
Index of Author Names 741
Index of Work Titles 759

ABBREVIATIONS OF REFERENCE BOOKS, DICTIONARIES, ENCYCLOPAEDIAS and JOURNALS

ACIHS - Actes du Congrés International d'Histoire des Sciences:
IV (Praha 1937) - Prague 1973 (Acta historiae rerum naturalium necnon technicarum, 6)
V (Lausanne 1947) - Lausanne - P., 1948
VI (Amsterdam 1950)) - Amsterdam - P., 1951
VII (Jerusalem 1953) - Jerusalem - P.,1955
VIII (Firenze - Milano 1956) - Florence - P., 1958
IX (Barcelona - Madrid 1959) - Barcelona - P., 1961
X (Ithaca - Philadelphia 1962) - P., 1964
XI (Warszawa - Krakow 1965) - Warsaw, 1968
XII (Paris 1968) - P., 1968-1971
XIII (Moskva - Leningrad 1971) - M., 1974
XIV (Tokyo - Kyoto 1974) - Tokyo, 1975
XV (Edinburgh 1977) - Edinburgh, 1977-1978
XVI (Bucureşti 1981) - Bucharest, 1981
XVII (Berkeley 1985) - Berkeley, 1985
XVIII (Hamburg - München 1989) - Hamburg, 1989
XIX (Zaragoza 1993) - Zaragoza, 1993
XX (Liège 1997) - Liège, 1997

ADK(D) (a, i, m, p, fl, fm, fs) - avtoreferat dissertatsii na soiskaniye uchonoy stepeni kandidata (doktora) arkhitektury, istoricheskikh, meditsinskikh, pedagogicheskiikh, filologicheskikh, fiziko-matematicheskikh, filosofskikh nauk.

AGL - Arabskaya geograficheskaya literatura - Krachkovskiy [7]

AGM - Archiv für Geschichte der Medizin. Lp., 1-18, 1908-1925.

AGMNT - Archiv für Geschichte der Mathematik, der Naturwissenschaften und der Technik. Lp., 1918-1931.

AGMW - Abhandlungen für Geschichte der mathematischen Wissenschaften. Ed. M.Cantor, Lpz. 1877-1909.

AGN - Anhandlungen zur Geschichte der Naturwissenschaften. Lpz., 1-8, 1908-1915.

AGNM - Abhandlungen zur Geschichte der Naturwissenschaften und der Medizin. 1-8. Erlangen, 1922-1925.

AGNT - Archiv für Geschichte der Naturwissenschaften und der Technik. 1-8. Lpz., 1909-1918.

AH - Adiyat Halab. Annual devoted to the Study of Arabic Science and Civilization. Aleppo, since 1975.

AHES - Archive for History of Exact Sciences. Ed. C.Truesdell. B. - Hb. - N.Y., since 1961.

AIHS - Archives internationales d'histoire des sciences, founded by A.Mieli. P.-Roma, since 1947.

AJ - Abhath jadida li-l-musta'ribin al-sufyati - Novyye issledovaniya sovetskikh arabistov, M., 1986-1991.

ARIV - Arabskiye rukopisi Instituta Vostokovedeniya - "Arabskiye rukopisi" [1]

ASP - Arabic Sciences and Philosophy, A historical journal. Ed. by R.Rashed, Cambridge, since 1991.

AÜDFD - Ankara Üniversitesi Dil ve Tarih-Cografya Fakültesi Dergisi. Ankara, since 1944.

BBSMF - Bolletino di bibliografie e di storie delle mathematiche e fisiche. Ed. B.Bon-compagni. Roma, 1868 - 1884.

BM (1), (2), (3) - Bibliotheca mathematica. Herausg. von G.Eneström. 1. Folge. Stockholm, 1884-1886; 2. Folge Stockholm - B. -P., 1887-1899; 3. Folge. Lpz., 1900-1916.

BMLT - Bibliography of Manuscript Libraries in Turkey and Publications about the Manuscripts Located in these Libraries. Edited by Ekmeleddin Ihsanoğlu.

BSOAS -Bulletin of the Schoool of Oriental and African Studies. L., since 1938.

CR - Comptes rendus des séances de l'Académie des sciences. P.

DAN - Doklady Akademii Nauk (SSSR, Azerb., Kazakh., Taj., Turkm., Uzb. SSR).

DSB - Dictionary of Scientific Biography, ed. by Ch.Gillispie. N.Y., since 1969.

EHAS - Encyclopaedia of the History of Arabic Sciences. Ed. by R.Rashed. L. - N.Y., 1996. There is also a French edition: Encyclopédie de l'Histoire de la science arabe. P., 1997.

EI - Encyclopaedia of Islam. 1-5. Leiden - L., 1913-1938. There are also French and German editions: Encyclopédie de l' Islam. 1-5. Leiden - P. and Enzyklopaedie des Islam. 1-5. Leiden - Lpz.

EI² - Encyclopaedia of Islam. New edition. Leiden - L., since 1954. There is also a French edition: Encyclopédie de l'Islam, Leiden - P.

EIr - Encyclopaedia Iranica, ed. E.Varshater, L.-Boston, since 1982.

EJ - Encyclopaedia Judaica

ENWC - Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures, ed. H. Selin. Dordrecht-Boston-L., 1997.

FE - Filosofskaya entsiklopediya. M., 1960-1970.

FMI - Fihris al-makhtutat al-'ilmiyya al-mahfuza bi-Dar al-kutub al-Misriyya. King [28]

FMNSV - Fiziko-matematicheskie nauki v stranakh Vostoka. M., 1966-1969.

GAL - Geschichte der arabischen Litteratur - Brockelmann [1]

GAL² - Geschichte der arabischen Litteratur. Supplementbande - Brockelmann [2]

GAS - Geschichte der arabischen Schrifttums - Sezgin [3-7, 10-13, 23]
GCL - Geographical Coordinates of Localities - Kennedy & Kennedy [1]
GOW - Die Geschichtsschreiber der Osmanen und ihre Werke - Babinger [1]
GWG - Die Großen der Weltgeschichte
HD - Historia compendiosa dynastiarum - Abu'l-Faraj [1]
HD² - Kurze Geschichte der Dynastien - Abu'l-Faraj [2]
HM - Historia mathematica. Toronto, 1973 -1978; N.Y. - L., since 1979.
HMA - Histoire de la médicine arabe - Leclerc [1]
HOSSC – History of the Ottoman State, Society & Civilisation - Ihsanoğlu [9-10].
IA - Islâm Ansiklopedisi. Istanbul, since 1941.
IAI - Istoriko-astronomicheskiye issledovaniya, M., since 1975.
IAN - Izvestiya Akademii Nauk (SSSR, Azerb., Kazakh., Taj., Turkm., Uzb. SSR).
IHS - Introduction to the History of Science - Sarton [1]
IJHS - Indian Journal of History of Science. New Delhi, since 1966.
IMEN - Istoriya i metodologiya yestestvennykh nauk. M., since 1960.
IMI - Istoriko-matematicheskiye issledovaniya. Founded by A.P.Yushkevich, M., since 1948, since 1993 ed. by S.S.Demidov.
INTSV - Iz istorii nauki i tekhtiki v stranakh Vostoka. M., 1960-1963.
ISHAS - International Symposium for the History of Arabic Sciences. I (Aleppo, 1976). Proceedings. Aleppo. I 1977, II 1976. 2 (Aleppo, 1979).
JA (1) - (12) - Journal asiatique. P., 1ère série, 1822-1827, 2ème série, 1828- 1835, 3ème série, 1836-1842, 4ème série, 1843-1852, 5ème série, 1853-1862, 6ème série, 1863-1872, 7ème série, 1873-1882, 8ème série, 1883-1892, 9ème série, 1893-1902, 10ème série, 1903-1912, 11ème série, 1913-1922, 12ème série - since 1923.
JAOS - Journal of the American Oriental Society. N.Y.- New Haven.
JE - Jewish Encyclopaedia
JHA - Journal of History of Astronomy. Ed. M.A.Hoskin, L., since 1970.
JHAS - Journal of the History of Arabic Science. Aleppo, since 1977.
JNES - Journal of Near Eastern Studies. Chicago, since 1942.
JPR - Jahrbuch für Photographie unds Reproduktionstechnik. Herausg. von J.M.Eder. Halle an Saale. 1893-1913.
JRAS - Journal of Royal Asiatic Society of Britain and Ireland. L.
JRASB - Journal of the Royal Asiatic Society of Bengal, 3rd series. Calcutta, since 1935.
KF - Kitab al-Fihrist - Ibn al-Nadim [1]
KF² - Das Mathematiker Verzeichnis im Fihrist - Ibn al-Nadim [2]
KZ - Kashf al-zunun 'an isama al-kutub wa'l-funun - Hajji Khalifa [5]
LM - Lexikon des Mittelalters, München - Zürich, since 1980.
MA - Les Mathématiques Arabes - Yushkevich [13]
MAA - Die Mathematiker und Astronomen der Araber und ihre Werke - Suter [7]
MAA² - Die Mathematiker und Astronomen der Araber und ihre Werke. Nachtrage und Berichtigungen - Suter [9]
MAA³ - Additions et corrections à Suter "Die Mathematiker und Astronomen der Araber" - Renaud [1]
MAMS - Matematiki i astronomy musul'manskogo srednevekov'ya i ikh trudy - Matviyevskaya and Rosenfeld [1]
MAY - Mathematical Astronomy in Yemen - King [30]
MIDEO - Mélanges de l'Institut Dominicain d'Etudes Orientales. Cairo, since 1954.
MMMA - Majalla Ma'had al-makhtyt.at al-'arabiyya. - al-Qahira, since 1374 h. [1955].
NAALC - Nova Acta Academiae Caesareae Leopoldino-Carolinae Germanicae curio-sum. Halle an Saale., since 1886.
NEM - Notices et extraits de manuscrits de la Bibliothéque Nationale (du Roi). P., since 1787.
NKMDT - Nashriyya-yi Kitabkhana-yi Markazi-yi Danishgah-i Tihran dar barayi nus-khaha-yi khatti. Tihran, since 1340 s.h. [1961].
NTM - Schriftenreihe für Geschichte der Naturwissenschaften, Technik und Medizin. Lpz., since 1964.
OALT – Osmanlı Astronomi Literatürü Tarihi - Ihsanoğlu a.o. [1]
OCLT – Osmanlı Coğrafya Literatürü Tarihi - Ihsanoğlu a.o. [3]
OM - Osmanlı Müellifleri - Bursalı [2]
OMLT - Osmanlı Matematik Literatürü Tarihi - Ihsanoğlu a.o.[2]
OMULT - Osmanlı Musiki Literatürü Tarihi - Ihsanoğlu a.o.[4]
PI - Les penseurs de l'Islam - Carra de Vaux [16]
PL - Persian Literature - Storey [2]
PL2 - Persidskaya literatura - Storey [4]
QS (A), (B) - Quellen und Studien zur Geschichte der Mathematik, Astronomie und Physik. Ed. O.Neugebauer and O.Toeplitz. Abt. A (Quellen). 1-4, B., 1930-1937, Abt. B (Studien). 1-4. B., 1931-1938.
QSNM - Quellen und Studien zur Geschichte der Naturwissenschaften und der Medizin. Ed. P.Diepgen and J.Ruska. 1-7. B., 1931-1940.
RHSA - Revue d'histoire des scieces et de leurs applications. Ed. par H.Berr. P., since 1948.
SA - Suddhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften. Cont. of AGMNT, since 1934, Lpz., (1946-1991, Wiesbaden).

SBPMS - Sitzungsberichte der physikalischen-medizinischen Sozietät in Erlangen, ed. E.Wiedemann, 34-60, Erlangen, 1902-1928.

SeT - Scienzati e tecnologi dalle origini al 1875. Ed. A.Mondatori, 1-3, Milano, 1975.

SHM/SHMS - Studies for the History of Medicine (and Science). New Delhi.

SHIM - Stambuler Handschriften islamischer Mathematiker - Krause [1]

SIAT - Survey of Islamic Astronomical Tables - Kennedy [5]

SSM - A Survey of Scientific Manuscripts in the Egyptian National Library - King [40]

STMI - Science and Technology in Medieval India - Rahman, Alvi, Khan Ghori, Samba Murthy [1]

SVR - Sobraniye vostochnykh rukopisey AN Uz. SSR - "Sobraniye rukopisey" [1]

TH - Ta'rikh al-hukama' - Ibn al-Qifti [1]

TIFI - Ta'rikh `ilm al-falak fi `Iraq - al-Azzawi [1]

TIIY - Trudy Instituta istorii yestestvoznaniya AN SSSR. M., 1947-1952.

TIIYT - Trudy Instituta istorii yestestvoznaniya i tekhniki AN SSSR. M., 1954-1961.

TNKA (m,f) - Trudy nauchnoy konferentsii aspirantov i mladshikh nauchnykh sotrud-nikov Instituta istorii yestestvoznaniya i tekhniki AN SSSR (sektsiya istorii matematiki i me-khaniki, sektsiya istorii fiziki). M., since 1958.

TSGU - Trudy Samarkandskogo gos. universiteta im. A.Navoi, Samarkand.

TTKB - Türk Tarih Kurumu. Belleten. Ankara, since 1933.

TTKY (7), (15) - Türk Tarih Kurumu publications, Istanbul, since 1937.

UA - `Uyun al-anba fi tabaqat al-atibba - Ibn Abi Usaybi`a [3]

VIYT - Voprosy istorii yestestvoznaniya i tekhniki, M., since 1956.

ZDMG - Zeitschrift der Deutschen Morgenländischen Gesellschaft. Lpz., 1847-1942, Wiesbaden, since 1947.

ZGAIW - Zeitschrift für Arabisch-Islamischen Wissenschaften,. Ed. F.Sezgin. since 1984, F.M.

ABBREVIATIONS FOR NAMES OF CITIES IN REFERENCES

B.	**Berlin**
Hb.	**Heidelberg**
F.M.	**Frankfurt Am Main**
L.	**London**
Lg.	**Leningrad**
Lpz.	**Leipzig**
M.	**Moscow (Moskva)**
N.Y.	**New York**
Ox.	**Oxford**
P.	**Paris**
SPb.	**St. Petersburg**
Tash.	**Tashkent**

MATHEMATICIANS, ASTRONOMERS AND SCHOLARS WHOSE TIME OF LIFE IS KNOWN

1. `ALI IBN ABI TALIB

`Alī ibn Abī Ṭālib, the fourth and last orthodox Caliph in 656-661, cousin and son-in-law of Prophet Muhammad, whose adherents founded shī`ism (shī`at `Alī = party of `Alī); it was related that he was a mathematician, astronomer and prepared calendars; it was also reported that he was instrumental in Abū'l-Aswad al-Du'alī's discovery of the Arabic calendar.

See: IHS (I 501), MAMS (III 97), SSM (31); Huart [1] (EI), Lane-Poole [1] (3-9), Vecchia Vaglieri [1] (EI^2).

M1. [Mathematical Treatise] - is mentioned by al-Khuzā`ī (No 604, M2) (see King [49a]). Al-Khuzā`ī informs that this treatise contains the solution of algebraic equations influenced by "mathematicians of Fars", that is Gundishapur, the center of pre-Islamic Iranian science.

A1. Ahjazdbud- Cairo (Taymur riyad 321/1). Persian translations: Calculation of Ahjazdbud (Ḥisāb-i Ahjazdbud)- Tashkent (238/5, 2900/16). Description of the Cairo manuscript: SSM (31), photo-reproduction of this manuscript: SSM (264). Description of the first Tashkent manuscript: SVR (V 220). A single page work to determine the week-days of the beginnings of the Muslim Lunar months. Manuscripts were written in 18th and 19th centuries. The Cairo manuscript contains three tables before the text; the tables are absent in the Tashkent manuscript. These tables are: 1) circle divided into 8 sectors with letters AHJZDBWD and Indian figures 1 5 3 7 4 2 6 4 in these sectors. The letters mean numbers in Arabic literal numeration Abjad, Indian figures represent the same numbers (Indian figures undoubtly were added by copyists), 2) table of week-days with figures: Sunday 1, Monday 2, Tuesday 3, Wednesday 4, Thursday 5, Friday 6, Saturday 7 (the numbers correspond to Arabic names of days), 3) Table of months with figures: Muḥarram Z 7, Ṣafar B 2, Rabī' I J 3, Rabī' II H 5, Jumāda I W 6, Jumāda II A 1, Rajab B 2, Sha'bān D 4, Ramaḍān H 5, Shawwāl Z 7, Dhū'l-qa'da A 1, Dhū'l-ḥijja J 3. Letters AHJZDBWD are called " letters of years" and mean weekdays of the beginnings of years; letters ZBJHWABDHZAJ are called " letters of months" and mean weekdays of beginnings of months. According to the letters of months, odd months contain 30 days, even months, except the last one, contain 29 days, Dhū'l-ḥijja contains 29 or 30 days. Letters of years correspond to mean 8 period: mean Muslim Lunar year contains 354 $\frac{3}{8}$ days, 8 year period with beginnings AHJZDBWD contains $5x354+3x355= 8x354\frac{3}{8}$ days. The title of the text is "Rule" (Qā 'ida). The rule is as follows: the Hijra year is rduced to modulo 8 to a letter of year (is divided by 8 and the remainder is found), to the obtained letter of year, the letter of month is added, and the sum is reduced to modulo 7. The letter obtained represents a weekday of the beginning of the required month of the required year. The rule is approximate since it supposes that all 8 year periods of Hijra years are mean and letters AHJZDBWD determine the weekdays of their beginnings. This rule was commented on in the work (No 606, A17) of al-Ṭūsī.

A2. [Astronomical Commentary on the Qur'an] - is mentioned in GAS (VI 10).

G1. [Treatise on Climates] - Cairo (Ṭal`at mīqāt 72/2).

2. SEVERUS SEBOKHT

Severus Sebokht (d. 667), born in Nisibis, Syria, Syrian philosopher and scholar, Christian bishop in the convent Qinnasrin on the upper Euphrates (now Eski Halab = Old Aleppo) in Northern Syria, which under his leadership became the main center of Greek learning in Western Syria. He wrote a commentary on some books of Aristotle's "Organon".

See: GAS (V 212-213), IHS (I 493), Baumstark [1] (246-247).

HS1. [Reasoning on the Priority of Syrians over Greeks in Mathematics and Astronomy] Sy - Paris (Syr. 346/1). Research: Nau [2] (III). Reasoning contains information on Indian reckoning "by means of nine signs", that is, on Indian arithmetic based on decimal numeration. It was one of the earliest pieces of information (perhaps, like (No 1, A1) of ibn Abī Ṭālib) on Indian decimal numeration in the Middle East. The work was written in 662.

A1. [On Constellations] Sy - London (Syr. Sup. 14538/5), Paris (Syr. 346/3). Description and partial French translation: Nau [2] (II). Treatise in 18 chapters written in 661.

A2. Treatise on the Astrolabe (Skolion de-mettul astrolabon) Sy - Berlin (Syr. 186/1), Paris (Syr. 346/2). Edition with French translation by Nau: Sebokht [1], English translation: Neugebauer [2]. Research: Nau [2] (IV). Treatise was written before 660.

A3. [Treatise on Lunar Phases and Eclipses] Sy - Paris (Syr. 346/6). Description by Nau [2] (245-247).

G1. [On Latitudes of Climates] Sy - Paris (Syr. 346/5). Description by Nau [2] (243-245).
PH1. [Compendium of Logic] P - London (Syr. Sup. 14660/4) P. Treatise was written in Persian for King Khusraw II (591-628).

3. YA`QOB OF EDESSA

Ya`qūb of Edessa (Ya`qūb al-Ruhāwī) (633-708), Syrian, born in `Endebha near Antiochia (now Urfa in Turkey). Grammarian, historian, philosopher, theologian; was pupil of Severus Sebokht (No 2), studied in Qinnasrin and Alexandria; later was Christian Monophysite (Jacobite) bishop in Ruha (Edessa).
See: GAS (V 212-213, VI 114-115), IHS (I 500-501); Baumstark [1] (248-256).
E1. Hexaëmeron Sy, encyclopaedia ordered according to six days of creation, finished by Jirjis Usquf al-`Arab (No 4). Edition: by Martin [1]. The work contains astronomical and geographical books.

4. JIRJIS USQUF AL`ARAB

Jirjis Usquf al-`Arab (George) (d. 724), bishop of Arabs, bishop of the Monophysitic Christian Arab tribes in Mesopotamia; Syrian philosopher and theologian. He translated and commented on Aristotle's "Organon" and the Bible, completed the "Hexaëmeron" of Ya`qūb of Edessa (No 3, E1).
See: GAS (VI 112-114), IHS (I 493); Baumstark [1] (159).
A1. [Poem on the calendar]. German translation: Ryssel [1].

5. JA`FAR AL-SADIQ

Abū `Abdallāh Ja`far al-Ṣādiq ibn Muḥammad ibn Bāqir ibn `Alī Zayn al-`Âbidīn ibn Ḥusayn ibn `Alī ibn Abī Ṭālib (700-765), direct descendant of Ibn Abī Ṭālib (No 1), sixth of the twelve imams of the Imamiyya sect; scholar, teacher of Jābir ibn Ḥayyān (No 9).
See: GAL (I 220), GAS (IV 128-130), IHS (I 508), PL (II 491, 496); Zettersteen [1] (EI).
Mi1. Book of the Treatise of Ja`far al-Ṣādiq on the Science of the Art and the Noble Stone (Kitāb risāla Ja`far al-Ṣādiq fī `ilm al-ṣinā`a wa'l-ḥajar al-mukarram). Edition with German translation by Ruska [12a].
A1. [Treatise on the Beginnings of Muslim Months] P – Mashhad (Ilah. 505).

6. IBRAHIM AL-FAZARI

Abū Isḥāq Ibrāhīm ibn Ḥabīb ibn Sulaymān ibn Samura ibn Jundab al-Fazārī (d. ca 777). The first Muslim astronomer to construct astrolabes.
See: AGL (66-68), GAL^2 (I 391), GAS (II 438, V 216-217, VI 122-124, VII 100-101), IHS (I 530), KF (273), KF^2 (27, 61), MAA (3, 280), MAMS (II 29), SSM (31), TH (57); Pingree [8], [12] (DSB), Rosenfeld [53] (ENWC).
M1. Book on Projecting the Globe onto a Plane (Kitāb fī tasṭīḥ al-kura) - is mentioned in KF and TH.
A1. [Poem on the Syrian months] - Cairo (Fāḍil mīqāt 108/1), is included in the treatise of al-Nabtītī (No 1163, A1).
A2. Zīj according to the Arab Years (al-Zīj `alā sinī al-`Arab) - is quoted by al-Bīrūnī in "India" (No 348, E2) - al-Bīrūnī [4] (I 165, 314-315, II 15-18) and in "Geodesy" (No 348, G3) - al-Bīrūnī [31] (121, 177). (According to the Arab years = according to the years of Hijra). KF and TH mention his astronomical works:
A3. Book on Operations with a Plane Astrolabe (Kitāb al-`amal bi'l-asṭurlāb al-musaṭṭaḥ).
A4. Book on Operations with Astrolabes with Rings (Kitāb al-`amal bi'l-asṭurlābāt dhawāt al-ḥalaq).
A5. Book on a Gnomon for Noon (Kitāb al-miqyās li'l-zawāl).
A6. Poem on the Science of Stars (Qaṣīda fī `ilm al-nujūm) = Poem on Stars (Qaṣīda al-nujūmiyya). Chapter on the determination of time is quoted in "Shadows" (No 348, A4) by al-Bīrūnī [47] (I 190-192).
A7. The Poem on Limits (al-Urjūza fī'l-ḥudūd) - is quoted by al-Qābisī in (No 205, A1) see GAS (VI 123).
A8. Zīj - poem (Zīj - qaṣṣīda) - is mentioned by Yāqūt in (No 557, HS1), see GAS (VI 123-124).

7. NAWBAKHT

Al-Nawbakht (d. ca 777) (nawbakht = new fortune), Persian astrologer in the service of Baghdad Caliph al-Manṣūr (754-775). Jointly with Māshāllāh (No 18), he made the preliminary survey for the foundation of the city of Baghdad in 762-763.

See: GAL² (I 391), GAS (VII 100-101), HD (224), HD² (115), IHS (I 531), KZ (V 35), MAA (3), MAA² (158), MAMS (II 30); `A. Iqbal [2].

A1. Book of Predictions (Kitāb al-aḥkām) - Istanbul (NO 2951), is quoted in KZ. Description of the manuscript: SHIM (444).

8. SUFYAN AL-THAWRI

Abū `Abdallāh Sufyān ibn Sa`īd ibn Masrūq al-Thawrī (713-778), theologian, jurist, alchemist, and mathematician.

See: GAS (I 518-519, IV 132, V 215-216), MAMS (II 30), TH (327); Raddatz [1].

9. JABIR IBN HAYYAN

Abū `Abdallāh Jābir ibn Ḥayyān al-Azdī al-Sūfī (second half of 8th c.), from Kufa, famous Arabic alchemist, known in Europe as "Geber". He was the author of "sulphur-mercury theory" of metals, according to which six metals differ by different proportions of sulphur and mercury in their contents.

See: GAL (I 278-279), GAL² (I 426-429), GAS (III 211-223, IV 132-269, V 219-225, VI 129-134, VII 108-110, 233-240, IX 230-232), HMA (I 70-77), IHS (I 532-533), KF (354-358), KZ (I 256, 280, 516, II 48, 311, III 365, 482, 593, IV 246-247, V 34, 79, 82, 86, 93, 104, 106, 120, 137, 152, 163, 277, 282, VI 140, 273, 396), MAA (3-4), MAA² (158), MAMS (II 30-31, III 362), PI (II 369, 375, 382), PL (II 435), TH (160-161); Abd al-Rahman [1], Ahrens [1], Berthelot [1] (I 336-350), Carra de Vaux [15] (EI), Darmstaedter [1], Holmyard [2-3], Juttner [1] (LM), Kraus [1-2, 4-5], Kraus and Plessner [1] (EI²), Lammens [1] (EI), Marquet [4], Mieli [2] (55-59), Plessner [8] (DSB), Ruska [10, 24], Ruska and Kraus [1], Sā`id [5], Stapleton [1], Ülken [4] (64-81).

E1. Book of Transition from Potentiality to Actuality (Kitāb ikhrāj fi'l-quwwa ilā'l-fi`l). Edition: Kraus [5] (1-95). German translation: Rex [1] (61-138).

Book in 2 parts: "Bases" - 1) introduction - possibility and actuality. 2) classification of things. 3) definitions. 4) nature of 7 planets. 5) nature of 12 zodiacal signs. 6) influence of planets and zodiacal signs. 7) natures of countries. 8) influence of planets on countries, animals, plants, and stones. "Sciences" - 1) medicine. 2) alchemistry. 3) special properties. 4) talismans. 5) action of higher forces. 6) correlation of measures. 7) artificial creation of life.

M1. Commentary on Euclid (Sharḥ Uqlīdis) is mentioned in KF (commentary on "Elements").

A1. Smart Zīj (al-Zīj al-laṭīf) is mentioned in KF as a work in 300 folios.

A2. Commentary on "Almagest" (Sharḥ al-Majisṭī) - is mentioned in KF. Commentary on Ptolemy's work.

TH mentions his astronomical works::

A3. On the Construction of Astrolabe (Fī `amal al-asṭurlāb) = Collection on Astrolabe Both Scientific and Practical (al-Jāmi` fi'l-asṭurlāb `ilman wa `amalan) - is mentioned in TH, which gives the information that al-Saraqusti (No 262) saw this work in Cairo. KZ (III 165) informs that this work was in 100 chapters.

A4. Book of Positions of Stars, on Numbers of their Degrees and Names (Kitāb aḥwāl al-kawākib wa `adad al-daraj wa asmā'ihā) - is mentioned by Ibn Ḥayyān in the treatise [3] (413-414).

Ph1. Book on Mirrors (Kitāb al-marāyā) - is mentioned in KF.

ME1. Book on Poisons and Removal of their Harmful Effects (Kitāb al-sumūm wa raf` maḍārrihā). Edition with German translation: Siggel [1]. Mathematical problems: Ruska [16] (here the decimal arithmetic system with zero was used before al-Khwārizmī No 41).

ME2. Book of Mercy (Kitāb al-raḥma) - a medical treatise. Latin translation published by Darmstaedter: Ibn Ḥayyān [1]. Problems of physics (on magnetism, in particular, on the imponderability of magnetic force). Research: Wiedemann [20] (322-326).

Ch1. Book of Seventy (Kitāb al-sab`īn) - 70 treatises on alchemy. Edition: Ibn Ḥayyān [2]. Facsimile edition of the Bursa manuscript with introduction in Arabic and English by Fuat Sezgin: Ibn Ḥayyān [5]. Edition of the first ten treatises with French translation by Lory: Ibn Ḥayyān [4]. Edition of selected treatises by Kraus: Ibn Ḥayyān [3]. Edition of the 9 treatises with French translation: Berthelot [1] (III 91-205, 126-224). German translation of the 5 treatises from Latin: Darmstaedter [1] (19-30). Research: Ruska [16-17].

Ch2. Elaboration of the Supreme Elixir (Tadbīr al-iksīr al-a`ẓam). Collection of 14 treatises. Edition with French translation by Lory: Ibn Ḥayyān [6].

Ch3. [Sum of Perfection]. French translation: P., 1976.

PH1. [Philosophical Treatises]. Research: Abū Rīda [2-3].

10. THIYUFIL IBN THUMA

Thiyūfil ibn Thūmā (Theophilos of Edessa), Theophilos, son of Thomas (695-785), Syrian Christian (Maronite) from Edessa, chief astrologer of the third Abbasid Caliph al-Mahdī (775-785), translator from Greek into Syriac.
See: IHS (I 537), MAA (223), MAMS (II 31-32), TH (109); Baumstark [1] (341-342), Meyerhof [2] (704).

11. YA`QUB IBN TARIQ

Ya`qūb ibn Ṭāriq (d. ca 796), astronomer, worked in Baghdad under Caliph al-Manṣūr.

See: AGL (66-68), GAS (V 217-218, VI 124-127, VII 101-102), IHS (I 530), KF (278), KF^2 (33), MAA (4), MAMS (II 32), SSM (31), TH (778); Hogendijk [15], [37] (ENWC), Kapp [1] (III 66), Pingree [5], [20] (DSB).

M1. Sine Division of Kardajas (Taqṭī` kardajāt al-jayb) - is mentioned in KF. "Kardaja" from Sanskrit "kramajya", sine of $\frac{1}{96}$ circumference of a circle, apparently in this treatise a table of sines through $3^{0}15'$ was given.

A1. Zij Extracted from Sindhind Degree by Degree (al-Zīj al-maḥlūl min al-Sindhind li daraja daraja) - is quoted by al-Hashimī (No 306, A1). By Abraham ibn Ezra, Jewish mathematician, in the foreword of his translation of the commentary (No 210, A1) and by Ibn al-Muthannā made on the Zīj of al-Khwārizmī (No 41, A1). Research: Hogendijk [16] (Chapter on the visibility of the Crescent), Kennedy [23].

A2. Composition of Celestial Spheres (Tarkīb al-aflāk) - is quoted in "India" by al-Bīrūnī (No 348, E2) - al-Bīrūnī [4] (I 316, 353, II 67-68) and in other works, see Pingree [4] (105-120). In particular, in "India" al-Bīrūnī [4] (II 68) quoted Ya`qūb ibn Ṭāriq's table of distances of the Sun, the Moon, the Planets, and the sphere of fixed stars from the Earth and their diameters.

A3. Book on Reasons [in Zīj] (Kitāb fi'l-`ilal) - is quoted in "Shadows" (No 348, A4) by al-Bīrūnī [12] (No 2, 84), see Pingree [4] (120-123).

A4. Book on what Rises from an Arc of a Meridian (Kitāb mā irtafa`a min qaws niṣf al-nahār) - is mentioned in KF.

12. ABU `ASIM `ISAM

Abū `Āṣim `Iṣām (8^{th} c.), astronomer, freed slave of Khālid al-Barmakī, adviser to the Baghdad Caliph al-Manṣūr (754-775).

See: MAMS (II 33).

A1. [Zīj] - is mentioned in "Shadows" (No 348, A4) by al-Bīrūnī [12] (No 2, 93).

13. SIM`AN AL-KABULI

Sim`ān ibn Sayyār al-Kābulī (8^{th} c.), astronomer from Kabul.

See: GAS (VI 134-135), MAMS (II 33).

A1. Zīj (Zīj) - is mentioned by al-Ḥamdānī (No 173) as composed according to Indian sources.

14. ABU YAHYA AL-BATRIQ

Abū Yaḥyā al-Baṭrīq (d. ca 800), (Yaḥyā = Johannes; baṭrīq = patriarch) Christian; Caliph al-Manṣūr's translator. He translated the works of Aristotle, Hippocrates, Galenus and the astrological work "Quadripartitum" of Ptolemy for `Umar al-Ṭabarī (No 27).

See: GAL (I 221-222), GAL^2 (I 364), HD (224), HD^2 (145), HMA (I 178), IHS (I 537), KF (273), KF^2 (27), KZ (III 97, VI 97), MAA (4), MAMS (II 33), UA (I 205); Steinschneider [12] (364-367).

15. MUHAMMAD AL-FAZARI

Abū `Abdallāh Muḥammad ibn Ibrāhīm ibn Ḥabib al-Fazārī (second half of 8^{th} c.), son of Ibrāhīm al-Fazārī (No 6), was ordered by Caliph al-Manṣūr in 772-773 to translate the Sanskrit astronomical work Siddhanta, probably, "Brahma-sphuta-siddhanta" of Brahmagupta, under the title "Sindhind". Possibly this translation was a vehicle by means of which the Hindu numerals were transmitted from Indians to Arabs.

See: AGL (66-68), GAL² (I 391), IHS (I 530), KF (79), MAA (4-5), MAA² (158), MAMS (II 33), PI (II 197-201), TH (270-271); Pingree [8], Rosenfeld [53] (ENWC), Smith and Karpinski [1].
"Sindhind" is quoted by al-Bīrūnī in "India" (No 348, E2) and "Geodesy" (No 348, G3). English translation of all extant fragments of "Sindhind": Pingree [8].

16. MUARRIJ IBN `UMAR

Abū Faid Muarrij ibn `Umar (d. 810), grammarian and astronomer.
See: GAS (VII 340, VIII 60-61), KZ (V 53), MAMS (II 34); Pellat [2].
A1. Book on anwā' (Kitāb al-anwā') - is mentioned in KZ.

17. AL-FADL IBN NAWBAKHT

Abū Sahl al-Faḍl ibn Nawbakht (d. ca 815), son of Nawbakht (No 7), astrologer and chief librarian of Caliph Hārūn al-Rashīd (786-809). He translated works from Persian into Arabic for the Caliph and wrote many astrological treatises.
See: GAS (VII 114), HD (224), HD² (145), IHS (I 531-532), KF (274), KF² (28), MAA (5), MAMS (II 34), TH (255); `A. Iqbal [2], Pingree [48] (EIr), Safa [1] (58-59).

18. MASHALLAH

Māshāllāh (mā shā' Allāh = what Allah wished) ibn Atharī al-Baṣrī (d. ca 815), a Jew from Basra (his Jewish name was Menasseh). He was known in Europe as "Messahalla". Astrologer, worked in Baghdad under Caliphs al-Manṣūr, Ḥārūn al-Rashīd (786-809), Amīn (809-813), and al-Ma`mūn (813-833). He participated with Nawbakht (No 7) in the preliminary survey for the foundation of Baghdad in 762-763.
See: GAL (I 249), GAL² (I 391-392), GAS (VI 127-129, VII 102-108, 324), IHS (I 531), KF (273-274), KF² (27), KZ (I 175), MAA (5-6), MAMS (II 34-35), PL (II 38-39), SSM (31) TH (327); Baldi [1] (429-431), Goldstein [3], Kennedy [10], Kunitzsch [22, 43], Lemay [18] (ENWC), Pingree [16] (DSB), [18], Ruska [19] (EI), Samsó [24] (EI²), Steinschneider [3] (15-83), Thorndike [3], Wensinck [5] (EI²).
A1. Book on Prices (Kitāb fi'l-as`ār) - Cairo (Ṭal`at mīqāt 157/3), Oxford (II 285/6). Astrological treatise.
A2. The Book Known as Twenty-Seventh (al-Kitāb al-ma`rūf bi-'l-sābi` wa-'l-`ishrīn) - is mentioned in KF. Latin translations under titles "On Science of the Movement of Spheres" (De scientia motus orbis) and "On Elements and Celestial Spheres" (De elementibus et orbibus coelestibus): Mashallah [1-2]. Book in 27 chapters. Research: Duhem [2] (II 204-206) - on the precession of equinoxes.
A3. Keys of Solutions (Mafātiḥ al-qaḍā') = Chapters of Keys (Abwāb al-mafātiḥ) P - Paris (II 895).
A4. Book on the Construction of Astrolabes and their Operations. (Kitāb ṣan`at al-asṭurlābāt wa'l-`amal bihā) - is mentioned in KF. Latin translation: Reisch [1], Gunther [1] (195-231). English translations: Gunther [1] (137-193), Thomson [1] (179-185 - chapters 17-18).
A5. Book on Conjunctions, Religions, and Nations (Kitāb fi'l-qirānāt wa'l-adyān wa-'l-milal). Edition with English translation of other astrological works by Māshāllāh: Kennedy and Pingree [1]. Research: Pingree [14]. KF lists also his works:
A6. Book on an Armillary Sphere (Kitāb dhāt al-ḥalaq).
A7. Book of Mysteries (Kitàb al-asrār) - Cairo (Ṭal`at mīqāt 157/3).
Mt1. Book on Rains and Winds (Kitāb al-amṭār wa'l-riyāḥ). Only a medieval Latin translation is extant. Research: Shangin [2] of a horoscope of Māshāllāh: Kennedy [9].

19. `ALI IBN AL-A`RABI AL-SHAYBANI

Abu'l-Ḥasan `Alī ibn al-A`rābī al-Shaybānī (d. ca 860), from Kufa, theologian.
See: GAS (VII 173), KF(278), KF² (34), MAA (7, 208), MAMS (II 35); Pellat [2].
A1. Book on anwā' (Kitāb al-anwā') - is mentioned by Pellat [2].

20. DIRAR IBN `AMR

Abū `Amr Ḍirār ibn `Amr al-Qāḍi (8^{th}-9^{th} c.), philosopher and theologian-mu`tazilite, pupil of Wāṣil ibn `Aṭā' (699-748), the founder of "mu`tazila" (seceders). Ḍirar himself founded a school of mu`tazila called

"dirariyya". He was an adherent of mathematical atomism and believed that a minimal geometric solid consisted of 10 atoms.

See: GAL^2 (I 338), GAS (I 614, V 30), MAMS (II 35); Ibn al-Nadīm [3] (69-70), Pines [1] (5), van Ess [1].

21. HISHAM AL-FUWATI

Hishām ibn `Amr al-Fuwaṭī (d. 813), philosopher and theologian-mu`tazilite, an adherent of mathematical atomism, believed that a minimal geometric solid consisted of 6 "bases" and each "base" consisted of 6 atoms.

See: GAS (V 30), MAMS (II 35); Pines [1] (5-7).

22. ABU 'L-HUDHAYL AL-`ALLAF

Abū'l-Hudhayl Muḥammad ibn al-Hudhayl ibn `Abdallāh al-`Allāf (752-840), from Basra, philosopher and theologian-mu`tazilite, worked in Baghdad and was the teacher of al-Naẓẓām (No 60). He was an adherent of mathematical atomism and believed that a minimal geometric solid consisted of 6 atoms, two of which formed a "length", two formed a "breadth", and two formed a "height".

See: GAL^2 (I 338), GAS (I 617-618, V 30), MAMS (II 35-36); de Boer [3] (49-51), Carra de Vaux [13] (EI), R. Frank [1], Nyberg [2] (EI^2), Pines [1] (5-8).

23. `ABDALLAH AL-ASNI

`Abdallāh ibn `Ubayd al-Asnī (d. ca 815), astrologer of Caliph Ḥārūn al-Rashīd. Manuscripts of his predictions for Ḥārūn al-Rashīd are extant; they are found in London (1004) and Istanbul (SM AS 2685).

See: MAA (7), MAMS (II 36).

24. AL- FADL AL-SARAKHSI

Al-Faḍl ibn Sahl al-Sarakhsī (770-818), from Sarakhs (Khurāsān, now in Turkmenistan), astrologer and vizier of Caliph al-Ma'mūn.

See: GAS (VII 115-116), KWA (I 413), KWA^2 (II 472), MAA (7), MAMS (II 36).

25. AL-NAZR IBN SHUMAYL

Abū'l-Ḥasan al-Naẓr ibn Shumayl al-Māzinī al-Baṣrī (d. 818), astronomer, philosopher, and linguist.

See: AGL (119-120), KZ (III 174, IV 324, 330, V 53, 72, 95, 105, 112, 125, 152, 574), MAMS (II 36); Pellat [2].

A1. Book on the Sun and the Moon (Kitāb al-shams wa'l-qamar) - is mentioned in KZ (V 105). Possibly, it was the commentary on the work by Aristarchus with the same title.

A2. Book on anwā' (Kitāb al-anwā') - is mentioned in KZ (V 53).

26. YAHYA AL-FARRA

Abu Zakariyā Yaḥya ibn Ziyād ibn `Abdallāh al-Farrā' (761-822), from Kufa, grammarian; he taught grammar to the children of Caliph al-Ma'mūn; he knew astronomy well.

See: GAS (VII 343-344, IX 131-134), KF (66), KWA (II 228), KWA^2 (IV 63), MAA (7), MAMS (II 36); Abu'l-Fida [1] (II 142).

27. `UMAR IBN AL-FARRUKHAN AL-TABARI

Abu Ḥafṣ `Umar ibn al-Farrukhān al-Ṭabarī (d. ca 815), from Tabaristan, astronomer, architect, astrologer; he translated many books from Persian into Arabic, some of them by the order of Caliph al-Ma'mūn; he participated in the building of the city of Baghdad.

See: GAL^2 (I 392), GAS (V 226, VI 135, VII 79, 111-113, 324-325), HMA (290-291), IHS (I 567-568), KF (268-273), KF^2 (21, 27, 85), KZ (I 198, V 34-35, 386), MAA (7-8), MAA^2 (158), MAA^3 (170), MAMS (II 37), SSM (31-32), TH (241-242); Pingree [19] (DSB), [21].

A1. Book of Principles [of the Science] on Stars (Kitāb al-uṣūl fi'l-nujūm) - Escorial (917) - is quoted in KZ (V 34-35). Medieval Latin translation: `U. al-Ṭabarī [1]. Treatise in 150 chapters on principles of astronomy and astrology.

A2. Questions in Hundred Thirty Chapters (Masāil fī mi'a wa thalāthīn bāb) = Book of Questions on Predictions (Kitāb al-masāil fi'l-aḥkām) = Book on Predictions of Stars translated from Syriac (Kitab fi aḥkam al-nujum mutarjim min al-suryānī) - Berlin (5878, 5879), Cairo (ḥurūf 77, mīqat 165, 943/2, 1217; Ḥalīm mīqāt 11/5; Ṭal`at mīqāt 119/2, 129/2, 133/2, 139/5), Escorial (983/3), Paris (2600/1). Latin translation by Johannes of Seville: al-Ṭabarī [1]. Book in 130 chapters on principles of astronomy and astrology.

A3. Treatise on Prayers and Predictions of Stars (Risāla dar ṣalawāt wa aḥkām-i nujūm) P - Mashhad (5508). KF and TH mention his astronomical works:

A4. Book on Consent and Dissent of Philosophers on Orbits of Planets (Kitāb ittifāq al-falāsifa wa ikhtilāfihim fī khuṭūṭ al-kawākib).

A5. Book on Operations with the Astrolabe (Kitāb al-`amal bi'l- asṭurlāb).

A6. On the Form of Celestial Sphere (Fi hay'at al-falak, Fī ṣūrat al-kura) - is mentioned by al-Bīrūnī in his "Cartography" (No 348, M5), see Suter [47] (81). The first title is in the Leiden manuscript and the second one is in the Tehran manuscript; See GAS (VI 135).

A7. Book on Reasons [in Zīj] (Kitāb al-`ilal) - is mentioned in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 132).

28. ISHAQ AL-SHAYBANI

Abū `Amr Isḥāq ibn Mirār al-Shaybānī al-Karamānī (728-818), linguist, mathematician and mechanician.

See: GAL (I 116), GAL² (I 179), GAS (VII 341, VIII 121-123), KZ (I 311, III 173, IV 332, V 30, 72, 78-79, 163, VI 388), MAMS (II 37-38); Flügel [4] (139-142), Yaqut [1] (VI 77-84).

Me1. Book of Mechanics (Kitāb al-ḥiyal) - is mentioned in KZ (V 78-79).

29. SA`ID IBN AWS AL-ANSARI

Abū Zayd Sa`īd ibn Aws ibn Thābit al-Anṣārī (738-830), philologist and naturalist.

See: GAS (III 364, IV 332-333, VII 344, VIII 76-80, IX 67-68), KF (55).

Mt1. Book on Rain (Kitāb al-maṭar) - Paris (4231)

30. ABU ZAYD AL-ASMA`I

Abū Sa`īd `Abd al-Malik ibn Qurayb ibn `Alī al-Asma`ī (740-831), astronomer, geographer, and philologist.

See: GAS (III 364-365, IV 333-334, VII 344-345, VIII 71-76, IX 66-67), KF (55).

AG1. Treatise on Description of the Earth, Heaven, and Plants (Risāla fī ṣifāt al-arḍ wa'l-samā' wa'l-nabātāt) - Cairo (maj. 122)

A1. Book on anwā' (Kitāb al-anwā') - is mentioned in KF.

31. YAHYA IBN ABI MANSUR

Abū `Alī Yaḥyā ibn Abī Manṣūr (d. ca 830), Persian (his Persian name was Bizīst ibn Fīrūzān), astronomer in the service of al-Ma'mūn; was converted to Islam personally by Caliph al-Ma'mūn. He made astronomical observations in Baghdad in the years 829-830 and was the teacher of Banū Mūsā (No 74); died during the campaign against Byzantium.

See: GAL (I 250), GAL² (I 393), GAS (V 227, VI 136-137, VII 116), HD (248), HD² (161), IHS (I 566), KF (143, 145), KF² (29-63), KWA (II 194), KWA² (III 608), KZ (I 367, III 465-466, V 111, 120, 152), MAA (8-9), MAA² (158), MAMS (II 38, III 362), SSM (32), TH (356-358); al-Bayhaqī [1] (140), [5] (35), Bulgakov and Vahabova [1], Calvo [9] (ENWC), Qurbani [1] (38-39), Rekaya [1] (EI²), Vernet [20] (DSB).

His astronomical observations are described in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (60, 66, 258) and in KZ (III 465-466).

A1. Verified al-Ma'mūnic Zīj (al-Zīj al-Ma`mūnī al-mumtaḥān) - Escorial (II 927). Description of the manuscript: Derenbourg [7] (35-37). Edition: Ibn Abī Manṣūr [1]. Edition and French translation of the Chapter on conjunctions of planets: Ibn Yūnis [1] (170-174). Research: GAS (VI 136-137), SIAT (132, 146-

147); Destombes [1], Kennedy [36], Kennedy and Faris [1], Kurtik [3], Salam and Kennedy [1], Vernet [4], Viladrich [6]. KZ (III 465-466) informs that this Zīj was written by Yaḥyā ibn Abī Manṣur jointly with al-Marwarrudhi (No 42), Sanad ibn `Alī (No 48), and al-Jawharī (No 43).

A2. On Determining the Ephemerides of Five Planets (Fī ma`rifat taqwīm al-qawākib al-khamsa) - Cairo (mīqat 895/1 - a fragment), Paris (2487/1 - a fragment).

A3. Explanation on Celestial Spheres (al-Ibāna `an aflāk) - is mentioned in "Geodesy" (No 348, G3) by al-Bīrunī [31] (66). KF mentions the works:

A4. Book of the Operation [of Measuring] of the Altitude [of the Sun] for a sixth of an hour for the Latitude of the City of Peace (Maqāla fi `amal irtifā` suds sā`a li arḍ Madīnat al-salām). The City of Peace (Madīnat al-salām) is the Arabic name of Baghdad.

A5. Book Containing his Observations and Messages to Many [People] Concerned with Observations (Kitāb yaḥtawī `alā arṣād lahu wa rasāil ilā jamā`a fi'l-arṣād).

32. `ABDALLAH AL-MA'MUN

Abu'l-`Abbas `Abdallāh al-Ma'mun (786-833) Caliph of Baghdad in 813-833, son of Caliph Harun al-Rashīd from a Persian slave woman. He was in Khurasan in Merw until 819 where his father was the viceroy. He was ordered by his father to collect the group of astronomers and mathematicians headed by Ibn Abī Manṣur (No 31) and al-Khwārizmī (No 41). These scholars moved to Baghdad with him and they became the kernel of the academy called Bayt al-Ḥikma (House of Wisdom), where Muslims, Jews and Christians worked together. He was an ardent mu`tazilite. He died near Tarsus during a campaign against Byzantium.

See: GAS (VII 118), IHS (I 557-558), SSM (32); Destombes [1], Gogol' [1], Kunitzsch [52] (ENWC), Lane-Poole [1] (3-15).

A1. Al-Ma'mun's Book of a Lot (Kitāb al-qur`a al-Ma'muniyya) - Cairo (Taymur ghayb. 140), Oxford (Marsh 300). Al-Ma'mun was also the author of many astrological predictions.

G1. [Al-Ma'mun's World Map]. The map is described in the "Geography" of al-Khwarizmī (No 41, G1) and is reproduced in the work (No 717, E1) of al-`Umarī. The map was compiled according to Greek, Persian, Syriac, and Arabic sources. Reproductions: on covers of Sezgin's "List" [1-3] and "Publications" [1]. Research: Sezgin [20].

33. AL-HASAN AL-TAMIMI AL-ABAHH

Al-Ḥasan ibn Muḥammad ibn Ibrāhīm al-Ṭusī al-Tamīmī (end of 8th - beginning of 9th c.), known as "al-Abaḥḥ" (abaḥḥ = hoarse), from Ṭus, (Khurasan); physician and astrologer of Caliphs Harun al-Rashīd and al-Ma'mun, author of astrological works.

See: GAS (VII 117), KF (275), KF² (30), MAA (9), MAMS (II 38-39), UA (I 120, 131).

34. AL-HAJJAJ IBN MATAR

al-Ḥajjāj ibn Yusuf ibn Maṭar (8-9th c.), worked at the courts of Caliphs Harun al-Rashīd and al-Ma'mun, translator of Euclid's "Elements" in two variants, one for Harun al-Rashīd, the other for al-Ma'mun, and of Ptolemy's "Almagest".

See: GAS (V 225-226), IHS (I 562), KF (252, 265, 268), KF² (9, 16, 20), KZ (III 95-97, V 149, 385-386), MAA (9), MAMS (II 39), TH (64), UA (I 204); De Young [8] (ENWC), Tuqan [1] (210).

Manuscripts of his translation of "Elements": Djebbar [5a], St. Petersburg (C 2145), publication of the Leiden manuscript: Besthorn and Heiberg [1]. Manuscripts of his translation of "Almagest": Istanbul (Fatih 3439; Books XI-XIII), Leiden (680). Description of the Istanbul manuscripts: SHIM (445). His translations of "Elements": KZ (III 97, V 149), S. Brentjes [10], De Young [1-2], Heath [1] (78), Heiberg [1, 2], Klamroth [1]. Steinschneider [8, 12]. His translations of "Almagest": KZ (III 97, V 385-386).

35. SALAM

Salam (9th c.), astronomer, worked at Baghdad for Caliph al-Ma'mun in the House of Wisdom; translated works from Persian into Arabic.

See: KF (120, 243, 268, 305), KF² (20), KWA² (I 511), KZ (V 386), MAA (223), MAMS (II 39).

A1. Commentary on "Almagest" (Tafsīr al-Majisṭī) - is mentioned in KF as written jointly with Abu Ḥussān.

36. MU`AMMAR IBN `ABBAD

Abū Mu`tamir (`Amr) Mu`ammar ibn `Abbād al-Sulamī (d. 830), from Basra, philosopher and theologian-mu`tazilite, worked at Baghdad under Harūn al-Rashīd, founded the mu`tazilite sect "mu`ammariyya". He was an adherent of mathematical atomism and believed that a minimal geometric solid is an elementary cube consisting of 8 atoms.

See: GAS (I 616, V 30), MAMS (II 39); de Boer [3] (51-53), Ibn al-Nadīm [3] (62-63), Pines [1] (5-7).

37. YAHYA AL-KHAYYAT

Abū `Alī Yaḥyā ibn Ghālib al-Khayyāṭ (d. ca 835), apparently son of a tailor (al-khayyāṭ = tailor), pupil of Māshāllāh (No 18), was known in medieval Europe as "Albohali"; astrologer, author of many astrological works; knowledgeable in inheritance.

See: GAL (I 250), GAL² (I 394), GAS (VII 120-121), KF (276), KF² (31), KZ (V 518), MAA (9-10), MAMS (II 40), SSM (32-33); Suter [46] (EI), [49] (IA), Suter and Samsó [1] (EI²).

A1. Book of Collection of Indications of Births by Predictions of Stars (Kitāb fī jumlat al-adilla `alā'l-mawālīd min aḥkām al-nujūm) - Cairo (Fāḍil mīqāt (204/3). Edition of the Latin translation by Johannes of Seville under the title "On Predictions of Births" (De judiciis nativitatum) - al-Khayyat [1].

A2. Uses from Words of Abū `Alī al-Khayyāṭ (Fawā'id min kalām Abī `Alī al-Khayyāṭ) - Cairo (mīqāt 180/3, Fāḍil maj. 39/4).

38. AYYUB AL-BASRI

Ayyūb ibn Sulaymān al-Baṣrī (9th c.), from Basra, mathematician; he was knowledgeable in the division of inheritance.

See: IHS (II 187), KZ (IV 398); Hughes [2], Ruska [4] (21-23).

M1. Division of Inheritances (Farāiḍ) - is mentioned in (No 179, M1) by Ibrāhīm, who informs that he proposed the method of substitution - "rule of injection" (regula infusa), for solving linear equations.

Research: IHS (II 187); Hughes [2], Ruska [4] (21-23); Hughes calls al-Baṣrī "early algebraist".

39. AHMAD AL-NAHAWANDI

Aḥmad ibn Muḥammad al-Nahāwandī (d. ca 840), from Nahawand (Jibal), astronomer and mathematician, worked in Gundishapūr (Fars), the main scientific center of pre-Islamic Iran.

See: GAS (V 226-227, VI 135-136), KF (282), KF² (38), MAA (10), MAMS (II 40); Pingree [53] (EIr), Qurbani [1] (37-38), Sayılı [18] (50-51, 78, 357-358), Tūqan [1] (211).

KF mentions his works:

M1. Book on Addition and Substraction (Kitāb al-jam` wa'l-tafrīq).

A1. Comprehensive Zīj (al-Zīj al-mushtamil) - is quoted by Ibn Yūnis [1] (154-157) in his Zīj (No 283, A1).

A2. Introduction to the Science of Stars (al-Madkhal ilā `ilm al-nujūm).

40. MUHAMMAD IBN AL -`ARABI

Abū `Abdallāh Muḥammad ibn Ziyād al-Kūfī "Ibn al-`Arabī (767-825), from Kūfa, jurist, linguist, and astronomer.

See: GAL (I 116), GAL² (I 180), GAS (III 365, IV 334, VII 345, VIII 127-129), KZ (I 436, II 172, 174, IV 445, 587, V 49, 53, 78-79, 85, VI 387), MAMS (II 40).

A1. Book on Anwā' (Kitāb al-anwā`) - is mentioned in KZ (53).

Me1. Book on Mechanics (Kitāb al-ḥiyal) - is mentioned in KZ (78-79).

41. MUHAMMAD AL-KHWARIZMI

Abū `Abdallāh Muḥammad ibn Mūsā al-Khwārizmī al-Majūsī (ca 780 - ca 850). Sometimes as in the title of (No 41, G1) he is named Abū Ja`far as he was confused with Muḥammad ibn Mūsā ibn Shākir (see No 74). Al-

Khwārizmī came from the family of a Zoroastrian priest (majūs = Greek magos). He joined the group of astronomers and mathematicians of Caliph al-Ma'mūn (No 32) in Merw, and in 819 moved to Baghdad together with al- Ma'mūn. In Baghdad he worked in the service of caliphs al-Ma'mūn, al-Mu`taṣim (833-842) and al-Wāthiq (842-847). Under al-Ma'mūn he headed the House of Wisdom and the expedition to measure the length of 1^{o} of the terrestrial meridian between Tadmor (Palmyra) and Raqqa; under al-Wāthiq he headed an expedition to Khazars. In medieval Europe he was known as "Algorismus" and "Algorithmus" (hence the name of modern mathematical term "algorithm").

See: AGL (91-94), GAL (I 381-382), GAL^2 (I 339-241), GAS (V 228-241, VI 140-143, VII 128-129, 404, X), HD (248), HD^2 (161), IHS (I 563-564), KF (274), KF^2 (29), KZ (II 285, V 67-69, 168), MA (15-27, 34-53, 61-65), MAA (10-11), MAA^2 (158-160), MAMS (II 40-45), SSM (33), STMI (279), TH (286); Abdulla-zade [10, 13], Abdurahmanov [7-8], A. Ahmedov [19, 25], Aram [1], Berggren [10] (6-9, 63-65, 100-104, 114-115), Bulgakov [23-24], Bulgakov and Ahmedov [2], Bulgakov, Rosenfeld, and Ahmedov [1], Dumont [1], Fayzullayev [1, 5-6, 11-12], Hasanov [7] (13-26), Hunke [1] (GWG), J. Ibadov [5, 7]; Ja`fari Naini [3], Khayrullayev [19-22], King [32, 35], Kunitzsch [28, 34], Mal'tsev [5], Matviyevskaya [33, 35, 36], Mieli [1] (82-85), Nallino [1], Neghmatov [2-3], Parizi [1], Qurbani [1] (1-36), Rosenfeld [21] (SeT), [36-37, 47-48], Rosenfeld and Sergeyeva [38], Sadritdinova [1], A. S. Sadyqov [4], Sal'ye [3], Sani [1], Sergeyeva [2], Sesiano [17] (LM), [28] (ENWC), Sezgin [16], Siddyqov [8] (10-20), [10], M. Simon [10], Sirajdinov and Ahmedov [4], Sirajdinov and Matviyevskaya [6-9], Sokolovskaya [2-3], Tabatabai [2], Toomer [4] (DSB), Tuqan [1] (154-162), Van der Waerden [3] (3-13), Vernet [16], [27] (EI^2), Vogel [4-5], Volodarskiy [1-2], Wiedemann [193] (EI), [203] (IA), Wüstenfeld [2] (63-87), K. Yuldashev [1], Yushkevich [15], Yusupov, Bulgakov, and Ahmedov [1], G. Yusupova [1], Zamarayev [1-2], Zemanek [1-4]. Memorial collection and collection of papers. 1 Al-Khwārizmī [1-4]

M1. Book on Hindu Reckoning (Kitāb al-ḥisāb al-hindī) - this title is mentioned in KF (275) as the work of Sanad ibn `Ali (No 48) together with title of the work M2 of al-Khwārizmī. The medieval Latin translation of this treatise under the title "De numero indorum" (according to the first words of the book) is extant and was published by Boncompagni [,1] (1-23) and Vogel [2]. Facsimile editions of the Latin manuscript: al-Khwārizmī [12] (185-201) and in the works of Vogel [2] and Yushkevich [3]. Medieval Latin translations: Allard [6]. Latin revisions by Johannes of Seville: Boncompagni [1] (25-90) and by "Magister A. " (Pedro Alfonsi): Curtze [5]. English translation of the Latin manuscript: Crossley and Henry [1]. Russian translation by Kopelevich: al-Khwārizmī [5] (9-24), al-Khwārizmī [12] (5-19), Uzbeki translation by Ahmedov: al-Khwārizmī [14] (57-74). Research: Ahmedov [18] and by him - al-Khwārizmī [14] (139-148), Allard [1-7], Bulgakov, Rosenfeld, and Ahmedov [1] (52-77), Nagl [1], by Rosenfeld - al-Khwārizmī [5] (94-103), Ruska [4, 6], Vogel [1], Yushkevich [3, 6, 14].

Since KF attributes al-Khwārizmī's algebraical treatise M2 to Sanad ibn `Alī (No 48) and as well as the treatise "Book on Hindu Reckoning" (Kitāb al-ḥisāb al-hindī), probably it is the title of the Arabic original of al-Khwārizmī's treatise M1. This treatise was the first Arabic textbook of arithmetic with "Indian" (Arabic) figures 1, 2, . . . , 0. In the treatise, the following arithmetic operations are explained: addition, substraction, duplication (multiplication by 2), mediation (division by 2), general multiplication, general division, extraction of a square root both with integers and fractions. Like the Indians, these operations are made on a board covered by dust. In medieval Europe arithmetic textbooks with Arabic figures were called (from a Latin form of al-Khwārizmī's name) "algorisms" (the term "algorithm" came from another Latin form of his name).

M2. Book on Addition and Substraction (Kitāb al-jam` wa'l-tafrīq) - is mentioned in KF as a work of Sanad ibn `Alī (No 48). This book is mentioned as "another book on arithmetics" in al-Khwārizmī's book (No 41, M1). The fragment on summation of the progression $1+2+4+8+\ldots+2^n+\ldots$ and on the "chess problem" reduced to the sum $1+2+4+\ldots+2^{63}$ is quoted in the work (No 124, M1) by Abū Kāmil al-Miṣrī [2] (218-220). Russian translation of this fragment by al-Dabbagh: al-Khwārizmī [7] (213-215). Research: al-Dabbagh and Rosenfeld - al-Khwārizmī [7] (215-216), Rosenfeld [38]. Ruska [4] erroneously believed that this treatise coincided with (No 41, M1).

M3. Abbreviated Book on the Reckoning of Algebra and Almucabala (al-Kitāb al-mukhtaṣar fī ḥisāb al-jabr wa'l-muqābala) - Medina (Ḥikmat jabr 4, 6), Oxford (I 918/1). Edition of the Oxford manuscript with English translation by Frederic Rosen: al-Khwārizmī [1], edition of the same manuscript by Musharrafa and Mursi Ahmad - al-Khwarizmī [4]. Edition of the geometric chapter with English translation: Gandz [1], French translation of this chapter by Marre: al-Khwārizmī [2]. Latin translation by Gherard of Cremona: Hughes [1], Libri [1] (253-297), Latin translation by Robert of Chester, more complete than the Oxford manuscript: Karpinski [5]. Russian translation of the Oxford manuscript by Rosenfeld: al-Khwārizmī [5] (25-88), [12] (20-

81), Uzbeki translation by Ahmedov: al-Khwārizmī [14] (75-138), Tajiki translation by Khojiyev: al-Khwārizmī [15]. English translation of the Chapter on equations: Grant [2] (106-111). Research: Ahmedov [19], Björnbo [4], Bruins [2], Bulgakov, Rosenfeld, and Ahmedov [1] (77-113), al-Daffa' [2], Danish-Pazhuh [12], Dold-Samplonius [10, 12], Gandz [2, 4-6], Karpinski [2], Khojiyev: al-Khwārizmī [15], Maracchia [1], Matviyevskaya [34], Mazahéri [2], Musharrafa [1], Rashed [22-23], Rodet [1], Rosenfeld: al-Khwārizmī [5] (103-125), Sarton [3], M. Simon [1], Sirajdinov and Matviyevskaya [7], Wieleitner [1-2], Yuldashev [1] (economic problems in chapters 16-22).
Book in 27 chapters: 1-6) Rules of solution of 6 kinds of linear and quadratic equations with positive coefficients in canonical forms: "roots are equal to a number" (bx=a), "squares are equal to a number" ($cx^2=a$), "squares are equal to roots" ($cx^2=bx$), "squares and a number are equal to roots" ($cx^2+a=bx$), "squares and roots are equal to a number" ($cx^2+bx=a$), "roots and a number are equal to squares" ($bx+a=cx^2$). Equations are reduced to these canonical forms by operations "algebra' (al-jabr = "restoration"), that is, the transition of substracted terms of an equation to the other side as added ones, and "almucabala" (al-muqābala = "opposition"), that is, contraction of equal terms in both sides. Hence the first European name of this branch of mathematics "algebra and almucabala" and the modern term "algebra". 7-9) Demonstrations of chapters 4-6 by means of geometric algebra (for instance, for the equation $x^2+10x=39$ al-Khwārizmī regards x^2 as a square with side x and 10x as two rectangles with sides 5 and x, adds these rectangle to the square and supplements obtained G-figure to a complete square with side 5. Since the area of the G-figure is 39 and the square of the supplemented square is 25, the area of the big square is 39+25=64, its side x+5 is 8 and x=3). 10) Rules of multiplication of polynomials. Chapter 11) rules of arithmetical operations with quadratic irrationals. 12-13) Problems reduced to the equations of chapters 1-6 and solved by rules of usual arithmetic. 14) Problems solved by means of proportions. Chapter 15: measuring plane figures and solids (here for π al-Khwārizmī takes $3\frac{1}{7}$, $\sqrt{10}$, and $\frac{52832}{20000}$). 16-23) problems of inheritance. These problems contain much information on economic relations of the society of al-Khwārizmī, here the word "capital" (ra's al-māl, literally meaning "main property") appears. 23-27) "calculation of circulations" (ḥisāb al-dawr), more complicate problems of inheritance where an heir dies before the person who left the inheritance. This book was the first book that included the term "algebra". The book was dedicated to Caliph al-Ma'mūn.

MA1. [Quadrivium]. The Latin explanation by "Magister, A." (Pedro Alfonsi) together with his explanation of the treatise M1: Milan (A sup. 3), Munich (Lat. 13021, 18927), Paris (Lat. 16208). The Milan manuscript is entitled "Book of the Introduction by al-Khwārizmī to whole Quadrivium" (Liber ysagogarum alchoarismi ad totum quadrivium), Paris manuscript - "Book of the Introduction by al-Khwārizmī to the astronomical art" (Liber ysagogarum alchorismi in artum astronomicum). Apparently, the last title is a translation of the Arabic title, (Kitāb al-madkhal fī'l-tanjīm) and the first title was given by the translator in accordance with the European tradition where "quadrivium" was the explanation of four higher "liberal arts", arithmetic, geometry, astronomy, and music. Research: Bulgakov, Rosenfeld, and Ahmedov [1] (158-162, 228-230), Rosenfeld [43].

A1. Zīj of al-Khwārizmī (Zīj al-Khwārizmī) = Zīj of al-Ma'mūn (Zīj al-Ma'mūnī) - two versions of this work are mentioned in KF. Latin translation by "Magister, A." (Pedro Alfonsi) of a revision by al-Majrīṭī (No 281, A1) - Suter [30], its English translation: Neugebauer [5] (133-234). Russian translation by Ahmedov: al-Khwārizmī [13] (27-80), Uzbeki translation by Ahmedov: al-Khwārizmī [14] (171-196). Translations of the trigonometrical Chapter: Danish by Björnbo [5], Russian translation by Kopelevich: al-Khwārizmī [5] (89-93) [12] 82-86). Research: by Ahmedov - al-Khwārizmī [13] (81-126), [14] (197-206), Ahmedov [15-17, 22], Ahmedov, Rosenfeld, and Sergeyeva [1], Björnbo [5], Bulgakov, Rosenfeld, and Ahmedov [1] (113-145), Burckhardt [1-2], Hogendijk [23] (sine tables), Kennedy [19], Kennedy and Janjanian [1] (crescent visibility), Kennedy and Ukashah [1] (tables of latitudes of planets), Neugebauer [5], Pingree [25a] (influence on Samaritan astronomers), by Rosenfeld - al-Khwārizmī [5] (125-129), Rosenfeld and Sergeyeva [2], Rozhanskaya [13, 15], Sergeyeva [3], Suter [22], Van Dalen [3], G. Yusupova [1].
Work in 37 chapters: 1-5) on chronology, 6): on degrees and minutes, 7-22) on motion of the Sun, the Moon, and planets, 23) on trigonometry, 24-27) on mathematical geography, 28) on gnomonic, 29-37) on velocities of planets, sizes of the Sun and Moon, eclipses, parallaxis, 12 astrological houses and other astronomical and astrological questions.

A2. Book on Operations with Astrolabes (Kitāb al-'amal bi'l-asṭurlābāt) - Berlin (5793). German translation (incomplete): Frank [2] (6-17). Russian translation of Frank's translation: Matviyevskaya [35] (255-266). Research: Ahmedov and Rosenfeld [4] (46-47) - on the part of the Berlin manuscript that is absent in the translation by Frank, Bulgakov, Rosenfeld, and Ahmedov [1] (146-153), Rosenfeld and Sergeyeva [2], Wiedemann and Frank [2] - on an instrument for determining the times of Muslim prayers.

A3. Book on the Construction of Astrolabe (Kitāb `amal al-asṭurlāb) - is mentioned in KF. A considerable part of this treatise is in the manuscript Berlin 5793/1 and it is a continuation of the manuscript of the treatise (No 67, A2) of al-Farghānī on the construction of astrolabe; it contains only Chapters absent in the treatise of al-Farghānī. Research: Ahmedov and Rosenfeld [4].

A4. The Vicesimal Table by Abū Ja`far Muḥammad ibn Mūsa al-Khwārizmī (al-Jadwal al-`ishrīnī li-Abī Ja`far Muḥammad ibn Mūsā al-Khwārizmī) - Cairo (Taymūr riyāḍa 103/2). Table for determining the azimuth of Qibla (the direction to Mecca) at a city X with geographical longitude l_x and latitude j_X containing 20 columns and 20 rows. The arguments of this table are differences and l_X-l_M and j_X-j_M where l_M and j_M are the longitude and latitude of Mecca.

A5. Determining an Ortive Amplitude at Each City (Ma`rifat si`at al-mashriq fī kull balad) - Istanbul (SM AS 4830/10a). This treatise, as well as the treatises A5-A9 and G2 adjoint to the treatise A10; these treatises that form manuscript AS 4830/10 devoted to determining various azimuthes (azimuth of the Sun, azimuth of Qibla, and ortive amplitude) in the Istanbul manuscript, are anonymous. The authorship of al-Khwārizmī was established by King [26] by the indicated authorship of A10 and coincidence of the vicesimal table in A9 with the table A4. Russian translation: Ahmedov [29] (157-167). Research: Ahmedov, al-Dabbagh, and Rosenfeld [1-3].
Ortive amplitude q is the arc ES of horizon between the point (E) of the East and the point (S) of the sunrise. It is obtained from the rectangular spherical triangle (EFS) where (F) is the base of spherical perpendicular dropped from (S) onto celestial equator. In this triangle (FS) is the declination d of the Sun and angle (SEF) is equal to (90^o-j) where (j) is the latitude of the place of observation. The rule of al-Khwārizmī is equivalent to the spherical sine law for this triangle.

A6. Determination of an Azimuth [of the Sun] by the Altitude (Ma`rifat samt min qibal al-irtifā`) - Istanbul (SM AS 4830/10b). Russian translation: Ahmedov [29] (167-170). Research: Ahmedov, al-Dabbagh, and Rosenfeld [1-3]. The rule of al-Khwārizmī is equivalent to the spherical cosine law for the spherical triangle (SPZ) whose vertices are the point (Z) of zenith, the pole (P) of celestial sphere and the Sun (S). In this triangle the sides(SZ, SP, and PZ) are equal to (90^o-h, 90^o-h, and 90^o-d), (h) is altitude of the Sun, for (j) and (d) see A5) and the angle (PZS) is the azimuth (A) of the Sun.

A7. Determining Operations with the Azimuth, Shadow, and Altitude (Ma`rifat `amal bi'l-samt bi'l-ẓill wa bi'l-irtifā`) - Istanbul (SM AS 4830/10c). Russian translation: Ahmedov [29] (170-171). Research: Ahmedov, al-Dabbagh, and Rosenfeld [1-3]. The rule of al-Khwārizmī is equivalent to the spherical cosine law for the same spherical triangle (SPZ) as in A6 and the angle (t) equal to the "hour angle" (SPZ). Al-Khwārizmī determines (h) through the hour angle (t), the maximal (noon) altitude (h_{max}), and the angle (t_o) called "half of the diurnal arc" which is equal to the angle (SPE) (for E see A5); (h_{max}) and (t_o) are related with (d) and (j) by sin vers t_o=1+tan j tan d and sin h_{max} = cos (j-d). This rule coincides with the rule of Brahmagupta. Al-Khwārizmī finds also the "plane shadow" of altitude (h) in "fingers", equal to (12 cot h).

A8. Geometric Construction of an Ortive Amplitude of Arbitrary Sign on Arbitrary Latitude (`Amal si`at ayy mashriq shi`ta min al-burūj fī ayy `arḍ shi`ta bi'l-handasa) - Istanbul (SM AS 4830/10d). Russian translation: Ahmedov [29] (190-193). Research: Ahmedov, al-Dabbagh, and Rosenfeld [1-3], Rosenfeld [48]. The rule of al-Khwārizmī for the ortive amplitude (ūk) is equivalent to his rule in A5, but he obtains this value by a geometric construction. Thus he uses a new method of solution of problems of spherical trigonometry, which can be called "geometric trigonometry" (see Rosenfeld [48]), this method was used often by Muslim astronomers.

A9. Determination of Direction of the Azimuth of Qibla of Arbitrary City (Ma`rifat taqwīm samt al-Qibla <li> ayyi baladin shi`ta) - Istanbul (SM AS 4830/10e), Tashkent 173/3). Russian translation: Ahmedov [29] (173-182). Research: Ahmedov, al-Dabbagh, and Rosenfeld [1-3]. The Tashkent manuscript, like the Istanbul one, is anonymous. The authorship of al-Khwārizmī was established by King. The azimuth of Qibla at the city X is obtained from the spherical triangle XMP where M is Mecca and P is the North pole of the Earth (or X and M are points of zeniths of X and Mecca and P is the North pole of the celestial sphere) by means of plane and spherical trigonometry. The treatise contains the vicesimal table A4.

A10. Witty Ideas on the Construction of Muḥammad ibn Mūsa al-Khwārizmī: Determination of the Azimuth by Astrolabe (Ẓarāif min `amal Muḥammad ibn Mūsā al-Khwārizmī: ma`rifat al-samt bi'l-asṭurlāb) - Istanbul (SM AS 4830/10f). Russian translation by al-Dabbagh: al-Khwārizmī [8] (216-219). Research: Bulgakov, Rosenfeld, and Ahmedov [1] (153-154), by al-Dabbagh and Rosenfeld - al-Khwārizmī [8] (219-221).

A11. Construction of Clepsydras, that is, Vessels for the [Determination of] Hours, Both Equal and Unequal (`Amal al-bankān wa huwa al-tughār wa-huwa al-bāss li'l-sā`āt al-musta-wiyya wa'l-mu`wajja) - Istanbul (SM AS 4830/11a). Russian translation: Ahmedov [29] (182-190). Research: Ahmedov, al-Dabbagh, and Rosenfeld [1- 3]. This treatise, as well as the treatises A12-A19 adjoint to the treatise A20 (these treatises form the manuscript SM AS 4830/11 mainly devoted to the description of various horary instruments) in the Istanbul manuscript, are anonymous. The authorship of al-Khwārizmī was established by King [26] by the indicated authorship of A20. The term "bankān" from Persian "pangān" (vessel), means a clepsydra in the form of a wide round vessel with an aperture at the center and a scale at the bottom of the vessel.

A12. Construction of Clepsydras Called Pebble Ones (`Amal al-bankān alladhī yusamma al-bunduqiyya) - Istanbul (SM AS 4830/11b). The term "bunduq" from Persian "funduq" (nut), means a pebble, freed by a mechanism moved by falling water. The freed pebble falls on a metallic plate and emits a ring.

A13. Construction of Horary Water Wheel (`Amal dūlāb al-sā`āt) - Istanbul (SM AS 4830/11c). Description of a horary instrument having the form of a water wheel.

A14. Construction of Horary Mukhula (`Amal al-mukḥula li'l-sā`āt) - Istanbul (SM AS 4830/11d). Description on a conic sundial. Hour lines of this sundial are graphs of a function f(t, l) where (t) is time of a day and (l) is the day in a year. The term "mukḥula" = box for antimony; (from "kuhl" = antimony) was chosen for the name of this sundial since its shape is similar to this box.

A15. Construction of a "Broom" (`Amal al-miknasa) - Istanbul (SM AS 4830/11e). Description of a type of sundial. Treatise contains a table of length of shadow of a gnomon and their azimuth for days of equinoxes through 15 minutes. Length of the shadow and its azimuth coincide with polar coordinates (position vector and polar angle) of the end of this shadow.

A16. Operations with a Horary Quadrant (al-`Amal bi rub` al-sā`āt) - Istanbul (SM AS 4830/11f). Russian translation: Ahmedov [29] (193-197). Research: King [26]. Description of the measuring time by a horary instrument which is a quadrant of a circle with two dioptras on one rectilinear side and a thread with a load fastened at the center of the circle; time is determined by hour lines. The quadrant is disposed in a vertical plane and its rectilinear side with two diopters directed towards the Sun, then the thread with a load intersects an arc concentric to the round side of the quadrant corresponding to a month at the point of the hour line, corresponding to the moment of the measuring.

A17. Compasses for a Camp (Birkar al-ḥilla) - Istanbul (SM AS 4830/11g). Russian translation: Ahmedov [29] (197-198). Research: Ahmedov, al-Dabbagh, and Rosenfeld [1- 3]. Description of an instrument for drawing great circles on the surface of the Earth, consisting of a pole with a flag and a torch at the center of a circle and a cart with an "alhidad" containing two dioptra. The drawn circle joins the points at which the flag or the torch is seen under the same angle.

A18. Method of Determining Lunar Eclipses (Ṭarīq ma`rifat khusūf al-qamar) - Istanbul (SM AS 4830/11h). Russian translation: Ahmedov [29] (199-200).Description of an instrument for measuring lunar eclipses.

A19. [Treatise on Determining Prayer Times] - Istanbul (SM AS 4830/11i).

A20. Construction of Hours on the Plane of Sundials (`Amal al-sā`āt fī basīṭ al-rukhāma) - Istanbul (SM AS 4830/11j). Russian translation by al-Dabbagh: al-Khwārizmī [9] (221-232). Research: Bulgakov, Rosenfeld, Ahmedov [1] (154-158), al-Dabbagh and Rosenfeld - al-Khwārizmī [9] (232-234). "Book on Sundial" (Kitāb al-rukhāma) mentioned in KF apparently coincides with one of the treatises; A14, A15, and A20.

G1. "Book of Geography" - A Picture Book of the Earth, Cities, Mountains, Seas, Islands, and Rivers, Extracted by Abū Ja`far al-Muḥammad al-Khwārizmī from the book "Geography" composed by Claudius Ptolemy (Kitāb Ṣūrat al-arḍ min al-mudun wa'l-jibāl wa'l-biḥār wa'l-jazā'ir wa'l-anhar istakhrajahū Abū Ja`far al-Muḥammad al-Khwārizmī min kitāb al-Jughrāfiya alladhī allafahū Baṭlamyūs al-Kalawdhī).

Edition by Mžik: al-Khwārizmī [3], Partial edition: al-Khwārizmī [16]. Arabic text and Russian translation of the Chapter on Africa: Kubbel' and Matveyev [1] (269-292). English translation of the Chapter on coordinates of cities: Kennedy and Kennedy [1] (399-408). Partial edition and Russian translation: Kalinina [3] (11-107). Research: AGL (93), Ahmedov [21, 24, 26-27] and in al-Khwārizmī [14] (292-365), Ahmedov, Rosenfeld, and Sergeyeva [1], Aleksandrovskaya [1], Bulgakov [16], Bulgakov, Rosenfeld, and Ahmedov [1] (162-212), Buriyev [2] (Central Asia), Czeglédy [1] (Central Europe), Daunicht [1] (Southern, Eastern, and Northern Asia), [2] ("Island of Jewels" = Japan), Jafri [1-2], Hasanov [8] (10-20), Hasanov and Buriyev [1-2], Jafri [1] (world map), Kalinina [1-3] (Eastern Europe, Central and Northern Asia), Mal'tsev [6-7], Maróth [1] (Central Asia), [3] (Syriac sources), Mžik [1] (Africa), [2] (Eastern Europe), Nallino [1], Rosenfeld [44] (classification of curves for coast lines of continents and islands), Teshabayev [1], Wieber [1] (North-Western Europe).

Table of coordinates of 2024 points - cities, terminal points of ranges, nodal points of coasts and rivers in seven climates. Coordinates are not taken from Ptolemy's "Geography" but from the Map of al-Ma'mūn (No

32, G1). In the book the cities built after al-Ma'mūn's death are added. The complete atlas of maps according to al-Khwārizmī's coordinates: Jafri [1-2].

G2. Determination of the Latitude of a City (Ma`rifat `arḍ al-balad) - Istanbul (SM AS 4830/10g). English translation of the table of geographic coordinates of cities: Kennedy [1] (409-412). Table of latitudes and longitudes of 164 cities in seven climates.

H1. Treatise on the Determination of the Era of Jews and their Holidays (Risāla fī istikhrāj ta`rīkh al-yahūd wa a`yādihim) - Patna (2468/24). Edition: "al-Rasāil al-mutafarriqa" [1] (No 1). Russian translation by Ahmedov: al-Khwārizmī [13] (127-133). Uzbeki translation by Ahmedov: al-Khwārizmī [14] (212-216). Research: by A. Ahmedov - al-Khwārizmī [13] (134-137), [14] (217-221), Ahmedov [18, 20], Bulgakov, Rosenfeld, and Ahmedov [1] (118-122), Kennedy [16], Mžik [1-2, 4].

H2. Book of History (Kitāb al-ta'rīkh). There are extant fragments of the following works: 1) "Chronology" and "Geodesy" by al-Bīrūnī (No 348, E1 and G3), 2) Yāqūt al-Rūmī (No 557, G1), Yāqūt [1], 504), 3) al-Ya`qūbī (No 105, H1), al-Ya`qūbī [1] 5, 21, 126, 261), 4) Elias bar Shinaya (No 349, H1), text: Baethgen [1] (14-66), German translation: Baethgen [1] (109-132), French translation: Delaporte [1] (81-113), 5) Ḥamza al-Isfahānī (No 196, H1), al-Isfahānī [1] I 187, II 143), 6) Muḥammad al-Ṭabarī (839-923): al-Ṭabarī [1], I 328, 551, II 937, 1085), 7) Aḥmad ibn Abī Ṭāhir Ṭayfūr (819-883): Ṭayfūr [1], 55, 145, 212, 349, 8) anonymous "History of Caliphs" [1] 469, 471), 9) Ibn Badrūn (12-13th c.): Ibn Badrūn [1], 25, 226, 10) al-Suyūṭī (No 896), Mi1: al-Suyūṭī [6], 30-31, 11) anonymous "History of Sistan" [1] (88-89). Russian translation of fragments by al-Dabbagh (1)-(9): al-Khwārizmī [10] (234-250). Research: Ahmedov [23], Bulgakov and Rosenfeld [1], Bulgakov, Rosenfeld, and Ahmedov [1] (47-52), al-Dabbagh and Rosenfeld - al-Khwārizmī [10] (250-259), Nallino [1] (471-472). In extant fragments there are records of historical events from 312 B. C. to 928 A. D. This book was one of the first Arabic chronicles and was continued by al-Ṭabarī (No.58), Thābit ibn Sinān (No 197), Elias bar Shinaya (No 349) and others.

42. KHALID AL-MARWARRUDHI

Khālid ibn `Abd al-Malik al-Marwarrūdhī (first half of 9$^{th}$ c.), from Marwarrūdh (now Maruchak, Northern Afghanistan), astronomer; worked at Baghdad and Damascus in the service of Caliph al-Ma`mūn. His astronomical instruments and astronomical observations are described in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (60-61, 178-179, 268-269).

See: GAS (V 244, VI 139), IHS (I 566), KZ (III 466), MAA (11-12), MAMS (II 45-46), TH (219); Qurbani [1] (39-40).

KZ (III 466) states that al-Marwarrūdhī was one of the authors of the "Verified al-Ma'mūnic Zīj" (No 31, A1).

43. AL-`ABBAS AL-JAWHARI

Al-`Abbās ibn Sa`īd al-Jawharī (first half of 9th c.) from Gawhar near Farab (now the hill Gawhartübe in Southern Kazakhstan), worked at Baghdad under Caliph al-Ma`mūn, participated in astronomical observations in Baghdad in 829 and in Damascus in 832.

See: GAL (II 2017), GAL^2 (I 382), GAS (V 243-244, VI 138-139), IHS (I 562), KF (266, 272), KF^2 (25), KZ (I 382, III 466), MA (114-115), MAA (12), MAMS (II 46-47), TH (219); S. Brentjes [12] (ENWC), Kapp [1] (II 71), Qurbani [1] (40-41), Sabra [9] (DSB), Tūqan [1] (213).

M1. Supplements to the Fifth Book of Euclid's "Elements" (Ziyādāt fī'l-maqāla al-khāmisa min kitāb Uqlīdis) - Hyderabad (Osm. A 510), Istanbul (Millet Feyzullah 1359/4), Princeton (Yehuda 358), Tehran (Univ. adab. 284/1), Tunis (Ahmad. 5482/2). Description of the Istanbul manuscript: SHIM (446). Description of all manuscripts: GAS (V 244). An attempt of creation of theory of ratios of continuous quantities on the basis of "Euclid algorithm", apparently coinciding with the theory built by al-Khayyām in his commentary on Euclid (No 420, M3).

M2. Revision of the Book of Euclid (Iṣlāḥ Kitāb al-uṣūl) - is mentioned in KZ (I 382). The section on parallel lines is quoted by Naṣīr al-Dīn al-Ṭūsī in his treatise (No 606, M5). Russian translation of this chapter by Rosenfeld: al-Tūsi [16] (501-508), French translations of this chapter: Jaouiche [4] (37-44), Pont [1] (162-163). Research of this chapter: Jaouiche [4] (162-163), Rosenfeld [27] (46-49), Rosenfeld and Yushkevich [1], [10] (26-30).

M3. Book of Commentary on the Book of Euclid (Kitāb tafsīr kitāb Uqlīdis) - is mentioned in KF.

M4. Book of Propositions which he added to the First Book of Euclid (Kitāb al-ashkāl allatī zādahā fi'l-maqāla al-ūlā min Uqlīdis) - is mentioned in KF.

A1. Treatise on Determination of Distance of the Sun from the Center of the Earth (Risāla fī ma`rifat bu`d al-shams `an markaz al-arḍ) - Beirut (Greek. 364/18).

The Zīj (al-Zīj) mentioned in TH coincides with this zīj, that is (No 31, A1) since KZ (III 466) informs that al-Jawharī was one of authors of the "Verified al-Ma'mūnic Zij".

44. ABU'L-`ABBAS IBN HAMDUN

Abū'l-`Abbās ibn Ḥamdūn (9th c.), astronomer, worked in Nishapur. His astronomical observations are mentioned in the book (No 74, M1) by al-Makki and in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (226).

45. MANSUR AL-KHUZA`I

Manṣūr ibn Ṭalḥa ibn Ṭāhir ibn al-Ḥusayn al-Khuzā`ī al-Ṭāhirī (d. 854), governor of Merw, Amul, and Khwārizm, a member of the Ṭahirid dynasty. He was a philosopher, mathematician, astronomer and musician. His astronomical observations are described in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (66-67, 175, 226).

See: GAS (V 245, I 145), KF (117), MAMS (II 47); Saylı [18] (99-100).

M1. Treatise on a Number and Objects of Reckoning (Risāla fi'l-`adad wa'l-ma`dūdāt) - is mentioned in KF. Treatise on relations between the abstract notion of number and concrete objects of reckoning.

A1. Book of Demonstration of the Sphericity of the Heaven (Kitāb al-ibāna `an istidārat al-falak) - is quoted in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (66-67) and in "Mas`ūdic Canon" (No 348, A1) by al-Bīrūnī [14] (364).

46. HABASH AL-HASIB

Aḥmad ibn `Abdallāh al-Marwazī (ca 770 - ca 870), known as "Ḥabash al-Ḥāsib" (ḥāsib = calculator), from Merw, Khurasan, worked at Baghdad under caliphs al-Ma`mūn and al-Mu`taṣim; participated in astronomical observations in 825-835 (see "Geodesy" (No 348, G3) of al-Bīrūnī [31], 90, 213) and in measuring 1° of terrestrial meridian in the Sinjār plain (see "Geodesy" of al-Bīrūnī [31], 178-182).

See: GAL (I 250), GAL² (I 393), GAS (V 275-277, VI 173-175), HD (247), HD² (161), IHS (I 265), KF (275), KF² (29), KZ (III 564), MA (132-134, 162-163), MAA (12-13), MAMS (II 47-49), SSM (38), TH (170); Hartner [1] (EI), [15] (EI²), Hill [10] (EI²), Qurbani [1] (43-55), Souder [1] (ENWC), Tekeli [7] (DSB), Tūqan [1] (185-186).

M1. Book on Three Tangent Circles and the Mode of Their Connection (Kitāb al-dawāir al-thalātha al-mumāssa wa kayfiyyat al-ittiṣāl) - is mentioned in KF. Perhaps it is a revision or an attempt of the restoration of "On Tangencies" by Apollonius.

M2. [Analemma for Determining Qibla] is described by al-Bīrūnī in (No 348, M9).

M3. [Analemma for Determining Azimuth Circles on the Astrolabe] is described by Ibn `Irāq in (No 299, M5). Research: Berggren [14].

A1. Zīj Known as the Damascene (al-Zij al-ma`rūf bi'l-Dimashqī) - Istanbul (Yeni Cami 784/2). Edition and English translation of the introduction: Saylı [9]. Description of the manuscript: SIAT (151-152). Partial English translation and research: Debarnot [2, 4].

A2. Zīj (al-Zij) - Berlin (5750). Description of the manuscript: SIAT (126-127, 153-154). It is quoted in "Chronology" (No 348, E1) by al-Bīrūni [2] (177-178) and in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (96, 162, 168, 213). Research: Carra de Vaux [2], Irani [3] (tables of ephemerides), Debarnot [4] (comparison with A1), Kennedy [24], (on the iterative algorithm for solution of the trancendent "Kepler equation" $t=\theta$, msin θ), Kennedy and Agha [1] (on planetary visibility tables), Kennedy and Transue [2], Salam and Kennedy [1] (on Solar and Lunar tables), al-Saleh [1] (on Solar and Lunar distances and apparent velocities), Schoy [21, 23] (trigonometry), Suter [50].

A3. Verified al-Ma'mūnic Zīj (al-Zīj al-Ma`mūnī al-mumtaḥān) = (No 31, A1). Ḥabash al-Ḥāsib is named the author of the this Zīj in TH and in (No 348, E1) by al-Bīrūnī [2] (180). Apparently Yaḥyā ibn Abī Manṣūr (No 31), who first directed the work on this zīj, died before it was completed and it was finished under the supervision of Ḥabash al-Ḥāsib. Research: Vernet [4].

A4. Book on Knowledge of the Globe and on Operations with the Globe (Kitāb fī ma`rifat al-kura wa'l-`amal bihā) - Baghdad (Islam. 20/171), Istanbul (SM Esat 2015/2). Description of the manuscript: SHIM (446). Research: Lorch and Kunitzsch [1].

A5. Operations with a Spherical Astrolabe and Its Rarities (al-`Amal bi'l-asṭurlāb al-kurī wa `ajāibuhū) - Istanbul (TK 3475/2a), Tehran (Mahdawi 503/3).

A6. Knowledge of Properties of Observations and Operations with an Armillary Sphere (Ma`rifat kayfiyyat al-arṣād wa'l-`amal bi-dhāt al-ḥalaq) - Istanbul (TK 3475/2c).

KF also mentions his astronomical works:

A7. Zīj of the Shah (Zīj al-shāhī) "lesser than his two other zijes". The coincidence of the title of this zīj with the title of Sasanian Zīj-i Shāh (see Kennedy [8]) shows that this zīj can be a revision of the Sasanian zīj.

A8. Book on Distances and Bodies (Kitāb al-ab`ād wa'l-ajrām) - on distances of celestial bodies from the Earth and their volumes. This book is quoted in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (227) and is mentioned in KZ (V 30). Research: Langermann [2].

A9. Book on the Construction of an Astrolabe (Kitāb `amal al-asṭurlāb) - is also mentioned in KZ (III 366).

A10. Book on Sundials and Gnomons (Kitāb al-rahā'im wa'l-maqāyīs). Research: Charette and Schmidt [1].

A11. Book on the Construction of Horizontal, Vertical, Inclined, and Oblique Planes (Kitāb `amal al-suṭūḥ al-mabsūṭa wa'l-qā'ima wa'l-mā'ila wa'l-munḥarifa) - on construction of various kinds of sundials.

A12. Book on the Construction of a Plane Astrolabe (Kitāb San`at al-asṭurlāb al-musaṭṭaḥ) - is quoted by Ibn `Iraq in his work (No 299, M5).

A13. Construction of the Northern and Southern Astrolabe (San`at al-asṭurlāb al-shimālī wa'l-janūbī) - is quoted by Ibn `Iraq in his work (No 299, M5).

A14. Perfect Treatise on the Visibility of the Crescent (al-Risāla al-kāmila fī ru`yat al-hilal) - is quoted by Ibn `Irāq in his work (No 299, A10).

A15. Book of Observations in Baghdad (Kitāb al-arṣād fī Baghdād) - is quoted in the zīj (No 283, A1) by Ibn Yūnis [1] (161, 163).

A16. Book of Observations in Damascus (al-Risāla fī raṣad Dimashq) - in quoted in (No 283, A1) by Ibn Yūnis [1] (161).

47. `ALI AL-ASTURLABI

`Alī ibn `Isā al-Asṭurlābī al-Ḥarrānī (9th c.), from Harran, astronomer worked at Baghdad under Caliph al-Ma`mūn, participated in astronomical observations in Baghdad and Damascus and in the measuring 1^0 of terrestrial meridian in Sinjar.

See: GAL² (I 250), GAL² (I 394), GAS (VI 143-144), IHS (I 566), KF (284), KF² (41), KZ (III 366), MAA (13), MAA³ (170), MAMS (II 49-50), SSM (32); Berggren [10] (170-173), Hirschberg and Lippert [1], Rosenthal [3], Van der Waerden [2] (LM).

A1. Treatise on Operations with the Astrolabe (Risālat al-`amal bi'l-asṭurlāb) = Treatise on Astrolabe (Risālat al-asṭurlāb) - Alexandria (Mun. 1242b), Baghdad (Islam. 26), Beirut (196, Barudi), Damascus (4925/2), Escorial (II 976/3), Istanbul (SM AS 4857/5), Jerusalem (8, 13), Leiden (188/3), Najaf (Ayatallah 59), London (I 197), Oxford (I 967), Paris (5972/3), Rome (Vat. Borgia 217/3). Description of the Escorial manuscript: Derenbourg [7] (128-129). Edition of the Beirut manuscript by Cheikho: al-Asturlabī [1]. German translation of the Leiden manuscript by Schoy: al-Asṭurlabī [2].

A2. Tympanum of Horizons (al-Ṣafīḥa al-āfāqiyya) - London (5479/4).

A3. Treatise on Operations with the Lunar Tympanum and the Disk of Eclipses (Risāla fī'l-`amal bi'l-Ṣafīḥa al-qamariyya wa'l-ḥuqq[a] al-kusūfiyya) - Cairo (Zaki 706/6 - anonymous), Istanbul (TK 3509/5). Description of the manuscript: SHIM (447). These two instruments are also described by al-Bīrūni in "Astrolabes" (No 348, A5), see Wiedemann [142].

A4. Treatise on Refutation of the Art of Predictions of Stars (Risāla fī ibṭal ṣinā`at aḥkām al-nujūm) - is mentioned by Pingree [8] (36). Treatise on refutation of astrological predictions.

48. SANAD IBN `ALI

Abu'l-Ṭayyib Sanad (Sind) ibn `Alī al-Yahūdī (9th c.), a Jewish convert to Islam; astronomer, worked at Baghdad under Caliph al-Ma'mūn. He was the chief of "Kanīsa" (Temple) observatory in Baghdad at Shamasiyya district.

See: GAS (V 242-243, VI 138, VII 119-120), IHS (I 566), KF [1] (266, 275), KF^2 (17, 59), KZ (III 466), MAA (13-14), MAMS (II 50), SSM (32), TH (206); Kapp [1] (II 91-92), Tuqan [1] (208), Steinschneider [13] (34-35).

M1. Book on Algebra and Almucabala (Kitāb al-jabr wa'l-muqābala) - Aleppo (Basil 896).

M2. Book on Apotomes and Medials (Kitāb al-munfaṣilāt wa'l-mutawassiṭāt) - is mentioned in KF which erroneously ascribes him treatises (No 41, M1-M2) of al-Khwārizmī.

A1. Zīj (Zīj) - is quoted in the zij (No 283, A1) of Ibn Yūnis [1] (56, 66-67, 94).

A2. Book Containing Proofs Indicating the Absurdity that the Sun is Bigger and the Moon is Smaller than the Earth (Maqāla fī barāhin `alā ṭarīq al-khulf fī anna'l-shams a`ẓam min al-arḍ wa'l-qamar aṣghar minhā) - Lahore (Nabi). Edition: Heinen [4] (169-171). English translation: Heinen [4] (171-173). Research: Heinen [4].

G1 [Treatise on Calculation of the Circumference of the Earth] is quoted in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (185-186).

49. SAHL AL-TABARI

Sahl Rabbān al-Ṭabarī (first half of 9th c.) from Tabaristan, physician and astrologer, translator of Ptolemy's "Almagest".

See: IHS (I 565), KWA^2 (III 314), MAA (14-15), UA (I 308-309); al-Bayhaqī [5] (31), Steinschneider [13] (23-24).

50. SAHL IBN BISHR

Abū `Uthmān Sahl ibn Bishr ibn Ḥabīb ibn Hānī al-Isrāilī (al-Yahudī) (d. ca 850), a Jewish astrologer at the court of the viceroy of Khurasan, Ṭāhir al-Ḥusayn al-A`war (d. 822) and later under Ma'mūn's vizier al-Ḥasan ibn Sahl (d. 850). He was known in Europe as "Zahel" and "Zahel Benbriz".

See: GAL^2 (I 396), GAS (V 245, VII 125-128), IHS (I 569), KF (274), KF^2 (28, 62), KZ (V 35, VI 6), MAA (15-16), MAA^2 (160), MAMS (II 51), SSM (33); al-Andalusi [1] (88), Thorndike [1] (II 389-390).

M1. Book on Algebra and Almucabala (Kitāb al-jabr wa'l-muqābala) - is mentioned in KF.

MA1. Book on Astronomy and the Science of Arithmetic (Kitāb al-hay`a wa `ilm al-ḥisāb) - is mentioned in KF.

A1. Rarities of Solutions (Nawādir al-qaḍā`) = Keys of Solutions (Mafātiḥ al-qaḍā`) = Book of Predictions on the Science of Timekeeping (Kitāb fī'l-aḥkām fī `ilm al-mīqāt) = Book of Predictions according to Celestial Pointer (Kitāb fī'l-aḥkām `ala al-nuṣba al-falakiyya) = Book of Predictions (Kitāb fī'l-aḥkām) = Questions on Predictions of Stars (Masā'il al-aḥkām bi'l-kawākib) = Treatise on Twelve Stars (Risāla fī'l-kawākib al-ithnay `ashar) - Baghdad 12219), Beirut (199), Cairo (falak 4314/1, mīqat 9, 170, 963, Ḥālim mīqat 5, Ṭal`at mīqāt 139/1, Azhar maj. 510/1), Escorial (II 918/1, 9), Leiden (6838), Leipzig (Ref. 116, Univ. 799), London (sup. 7490/3), Milan (C 81), Rabat (2060), Tashkent (2715/1), Tunis (Ahmad. 5605, Nat. 8910/1, 18020). Description of the Tashkent manuscript: SVR (I 233). Description of the Escorial manuscript: Derenbourg [7] (22). Description of other manuscripts: GAS (VII 125). Latin translation by Hermann of Dalmatia under the title "Introduction into Principles of Predictions" is published as supplement to the astrological work "Quadripartitum" of Ptolemy [1]. Research: Stegemann [2] (15-16).

A2. Treatise on Seasons (Risāla fī'l-fuṣūl) - Cairo (Ṭal`at mīqāt 139/4).

A3. Book on Times (Kitāb al-awqāt) - Cairo (Fāḍil mīqat 190/1, Ṭal`at mīqāt 139/3), Escorial (II 919/4).

A4. Book on Choices by Twelve Houses (Kitāb al-Ikhtiyārāt `ala'l-buyūt al-ithnā `ashar) - Cairo (Ṭal'at mīqāt 139/2).

Mt1. On Rains and Wind (Fī'l-amṭār wa'l-rīḥ) - is mentioned in KF.

51. AL-HASAN IBN NAWBAKHT

al-Ḥasan ibn Sahl ibn Nawbakht (9th c.), grandson of Nawbakht (No 7), astrologer at the court of Caliph al-Wāthiq; made translations from Persian into Arabic.

See: HD (258), HD^2 (168), KF (244, 275), KF^2 (30), MAA (16), MAMS (II 52); `A. Iqbal [2].

A1. On Anwā' (Fī'l-anwā') - is mentioned in KF.

52. `ABDALLAH IBN NAWBAKHT

`Abdallāh ibn Sahl ibn Nawbakht (9th c.), brother of al-Hasan ibn Nawbakht (No 51); astrologer at the court of Baghdad caliphs.

See: HD (248), HD^2 (161), MAA (16), MAMS (II 52), TH (221-223); `A. Iqbal [2].

53. YAHYA AL-BATRIQ

Abū Zakariyā Yaḥyā ibn al-Baṭrīq, son of Abū Yaḥyā al-Baṭrīq (No 14), translator from Greek and Latin into Arabic, translated "On the Heavens" (De coelo) of Aristotle.

See: IHS (I 556), (I 208), KF(250), KF^2 (8), KZ (II 100, III 95, 97, 121, V 31, 164), MAA (16), MAMS (II 52), UA (I 208); al-Bayhaqi [5] (38-39).

54. MUHAMMAD IBN AL-BAZYAR

Muḥammad ibn `Abdallāh ibn `Umar ibn al-Bāzyār (9th c.), Persian (bāzyār = friend of a falcon), pupil of Ḥabash al-Ḥāsib (No 46), astronomer and astrologer.

See: GAL^2 (I 394), GAS (VI 193, VII 154), KF (276), KF^2 (30), MAA (16), MAMS (II 52), SSM (38).

A1. Book Containing the Collected Verses on Heavenly Objects (Kitāb fī jumal min dalālāt al-ashkhāṣ al-`aliyya) - Cairo (falak 3790/1).

A2. Zīj (al-Zīj) - is mentioned in KF.

55. IBN HIBINTA

Ibn Hibintā (9th c.), Christian, astrologer, worked in Baghdad.

See: GAL (I 221), GAL^2 (I393), GAS (VII 162-164, 331-332), KZ (V 654), MAA (16), MAA^2 (160), MAMS (II 52); Pingree [13] (DSB).

A1. Sufficient Guidance for the Aspiring (al-Mughnī fī irshād al-qāṣid) - Munich (852), is mentioned in KZ (V 654). Edition by Sezgin: Ibn Hibinta [1]. Research: Kennedy [6] (on comets). The treatise was written in 829.

56. IBRAHIM IBN AL-SALT

Ibrāhīm ibn al-Ṣalt (9th c.), translator from Greek into Arabic, translated "Physics" of Aristotle and "Almagest" and "Quadripartitum" of Ptolemy, wrote a commentary on the last work.

See: KF (250, 268), KF^2 (8, 20), KZ (III 98, 620, V 386), MAA (16-17), MAMS (II 53), UA (I 205); Troupeau [1].

57. IBN RAHIWAYH AL-ARRAJANI

Ibn Rāhiwayh al-Arrajānī (9th c.), from Arrajān situated between Basra and Fars; jurist and traditionist, died in 852 in Nishapur. Probably, coincides with Isḥāq ibn Ibrāhīm ibn Mahlad ibn Rāhiwayh, known as "Ibn Rahiwayh".

See: GAS (V 302-303), KF (266), KF^2 (17), MAA (17), MAMS (II 53); al-Bayhaqī [1], Kapp [1] (II 54), Tūqan [1] (210).

M1. Commentary on the Tenth Book (Tafsīr al-maqāla al-`āshira) - is mentioned in KF. Commentary on the 10th book of Euclid's "Elements".

A1. Zīj (al-Zīj) - is mentioned by Bayhaqī.

58. MUHAMMAD AL-TABARI

Abū Bakr Muḥammad ibn `Umar ibn al-Farrukhān al-Ṭabarī (9th c.), son of Abū Ḥafṣ `Umar ibn al-Farrukhān al-Ṭabarī (No 27); astronomer, astrologer, and physician.

See: GAS (V 228, VI 137, VII 130), HMA (I 292-293), IHA (I 569), KH (273), KF^2 (27), MAA (17), MAMS (II 53), TH (238).

A1. Book on Operations with the Astrolabe (Kitāb fī'l-asṭurlāb) - is mentioned in KF and TH.

A2. [Zīj] - is mentioned in "Shadows" (No 348, A4) by al-Bīrūnī [47] (I 130, 153).

A3. Book on Gnomon (Kitāb al-miqyās) - is mentioned in KF and TH.

59. `ABD AL-HAMID IBN TURK AL-KHUTTALI

Abū'l-Faḍl `Abd al-Ḥamīd ibn Wāsi` ibn Turk al-Khuttalī al-Ḥāsib (first half of 9th c.) from Khuttal, (al-ḥāsib = calculator). In some sources he is mentioned as "al-Jīlī" (from Gilan) which is not correct; mathematician, worked in Baghdad.

See: GAL² (I 383), GAS (V 241-242), KF (281), KF² (37), MA (43-44), MAA (17-18), MAMS (II 53-54), TH (230); Pingree [28] (EIr).

M1. Book on Algebra and Almucabala (Kitāb al-jabr wa'l-muqābala). A fragment on the solution of quadratic equations: Istanbul (SM Carullah 1505/2). Edition of the text of this fragment with Turkish and English translations: Sayılı [20] (145-170). Russian translation by Tagi-Zade: Ibn Turk [1]. Research: Sayılı [20], Tagi-Zade [1].

M2. Collection on Arithmetic (Jāmi` fī'l-ḥisāb) - is mentioned in KZ. Work in 6 books.

M3. Book on Deals (Kitāb al-mu`āmalāt) - is mentioned in KZ.

M4. Book on Rarities in Arithmetic and Properties of Numbers (Kitāb nawādir al-ḥisāb wa khawāṣṣ al-a`dād) - is mentioned in TH.

60. IBRAHIM AL-NAZZAM

Ibrāhīm ibn Sayyār ibn Hānī al-Naẓẓām (d. ca 840), from Balkh, studied in Basra, worked and died in Baghdad; Muslim philosopher, one of the leaders of mu`tazilites, naturalist and poet. He was an adherent of mathematical atomism.

See: GAL² (I 339), GAS (I 618-619, III 360-361), MAMS (II 54); Abū Rida and Ibn Sayyar [1], de Boer [3] (51-53), Nyberg [1] (EI), Paret [1], Pines [1] (9-16), Van Ess [1], [3] (EI²), Zakuyev [8].

On mathematical atomism of al-Naẓẓām: Sasaki [1].

61. `ABD AL-MALIK AL-QURTUBI

Abū Marwān `Abd al-Malik ibn Ḥabīb al-Qurṭubī (790-852), from Cordoba; jurist, physician, historian, and astronomer.

See: GAS (I 362, 468, III 230, VII 346, 374, VIII 251-252, IX 220); Kunitzsch [48].

A1. Book of Knowledge of the Stars (Kitāb ma`rifat al-nujūm) - Ait Ayach (Hamzawiyya 80/4). Description of the manuscript: GAS (VII 374). Research: Kunitzsch [48].

A2. Poem on Observations (Urjūzat al-nawāẓir) - Oxford (Hyd. 32/3).

62. YA`QUB IBN AL-SIKKIT

Abū Yūsuf Ya`qūb ibn Isḥāq ibn al-Sikkīt (802-858), philologist and astronomer, worked in Kufa.

See: GAS (IV 335, VII 347, VIII 129-136, IX 137-138), KF (72-73), KWA² (II 408-411); Anonymous [5] (EI²), Yaqut [2] (VII 301-302).

A1. Book on Anwā' (Kitāb al-anwā') - is mentioned in the book L1 of Ibn al-Sikkit [1] (21).

A2. Book on Days and Nights (Kitāb al-ayyām wa'l-layālī) - is mentioned in KF and by Yaqūt.

L1. Book of Letters (Kitāb al-ḥurūf). Edition: Ibn al-Sikkīt [1].

63. MUHAMMAD AL-BARMAKI

Muḥammad ibn al-Jahm al-Barmakī (9th c.), from the al-Barmakī family founded by the vizier of Harūn al-Rashid, former Zoroastrian priest in Balkh; was astrologer, historian and philosopher, translator from Pahlavi; worked in Baghdad under caliphs al-Ma'mūn and al-Muta`ṣim. He wrote an astrological work dedicated to al-Ma'mūn and the work on Persian kings mentioned in "Chronology" (No 348, E1) by al-Bīrūnī [2] (108).

See: GAS (VII 124), KF (245, 275-277), KF² (30, 33), KWA² (I 23), MAA (18), MAMS (II 54), TH (223, 284).

64. IBN ISHAQ IBN KUSUF

Ibn Isḥāq ibn Kusūf (9th c.), astromer, quoted by Ibn Yūnis [1] (58) in his Zīj (No 283, A1).

See: MAA (18), MAMS (II 54).

65. `YUHANNA IBN MASAWAYH

Abū Zakariyā Yuḥannā (Yaḥyā) ibn Māsawayh (or Māsūya) (776-857), Syrian Christian, born in Gundishapūr. He was the son of a pharmacist, came to Baghdad, studied under Jibrīl ibn Bakhtyashū`. He was the director of a hospital and physician at the courts of caliphs beginning with Harūn al-Rashīd to al-Mutawakkil (847-861). He wrote many medical works in Syriac and Arabic and translated Greek works. His "Disorder of the Eye" (Daghal al-`ayn) was the first systematic treatise in ophalmology. He taught Ḥunayn ibn Isḥāq (No 77). His medical works were based on the dissection of apes. He died in Samarra. In medieval Europe he was known as "Johannes Damascenus" and "Mesuë".

See: GAL (I 232), GAS (III 231-236, VII 326), HD (227-228), HMA (I 203-111), IHS (I 574), KF (295-296), TH (380-381), SSM (32), UA (I 175-183); Jacquart [1] (ENWC), Meyerhof [2], Prüfer and Meyerhof [2], Vadet [1] (EI²).

A1. Book on Times (Kitāb al-azmina) - Aleppo (Sbath 113), Alexandria (3328/2), Bursa (Çelebī 729/1), Cairo (Fāḍil mīqāt 4), Istanbul (SM Esat 1933/9), Rampur (I 493, tibb 204), Rome (Vat. Sbath 74, 799). French translations: Sbath [2], by Troupeau: Ibn Māsawayh [1].

ME1. Rarities of Medicine (Nawādir al-ṭibb). Medieval Latin translation with French translation by Jacquart and Troupeau: Ibn Māsawayh [2]. Other French translation: Sbath [3].

66. `ISA IBN YUNIS

`Isā ibn Yūnis (9th c.), he was a reckoner, also knew Greek science well; worked in Baghdad.
See: MAA (18), MAMS (II 55), UA (I 206).

67. AHMAD AL-FARGHANI

Abū'l-`Abbās Aḥmad ibn Muḥammad ibn Kathīr al-Farghānī (d. 861) from Farghāna, worked in Baghdad under Caliphs al-Ma'mūn, al-Mu`taṣim, al-Wāthiq, and al-Mutawakkil. He participated in determining 1° of terrestrial meridian in the Sinjar plain, see "Geodesy" (No 348, G3) of al-Bīrūnī [31] (179-182). In 861 by the order of al-Mutawakkil he restored the Great Nilometer on the island Rawda of the river Nile in Cairo and was executed by the order of the same caliph in the same year. As he was buried in the Christian cemetery in Cairo (see Wiet [1]), it is presumed that al-Farghānī came from the Central Asian Christians and his contacts with the Egyptian Christians-Copts was the cause of his execution. In medieval Europe he was known as "Alfraganus". (Dante Alighieri (1265-1341) in his "Divine Comedy" mentioned him as "Alfragano").

See: AGL (86-88), GAL² (I 392-393), GAS (V 259-260, VI 149-151, X), HD (248), HD² (161), IHS (567), KF (279), KF² (34), KZ (II 288, IV 438-439, V 419), MAA (18-19), MAA² (160), MAMS (II 55-58), SSM (34), TH (78); Baldi [1] (431-433), Bouzid [1] (ENWC), Delambre [1] (63-73), Hasanov [7] (26-29), Kapp [1] (III 38-39), King [32], Mieli [2] (87-88), Nasyrov and Hikmatullayev [1], Rosenfeld [44], Rosenfeld, Dobrovol'skiy and Sergeyeva [1], Rosenfeld, Dobrovol'skiy and Sergeyeva [2], Rosenfeld and Sergeyeva [1], Sabra [5a] (DSB), Sergeyeva [1, 3], Suter [38] (EI), [48] (IA), Suter and Vernet [1] (EI²), Walzer [4] (DSB), Wiet [1].

A1. Book on Elements of Astronomy (Kitāb fī uṣūl `ilm al-nujūm) = Book on Celestial Movements and Survey of the Science of Astronomy (Kitāb fī'l-ḥarakāt al-samāwiyya wa jawāmi` `ilm al-nujūm) = Book of Astronomy in Thirty Chapters (Kitāb al-hay'a al-fuṣūl al-thalāthīn) = Chapters of Introduction to Almagest, i. e. Thirty Chapters (al-Fuṣūl madkhal li'l-Majisṭī wa huwā thalāthūna faṣlan) = Causes of Celestial Spheres (`Ilal al-aflāk) = Construction of Celestial Spheres (Tarkīb al-aflāk) = Almagest (al-Majisṭī) = Science of Astronomy (`Ilm al-hay'a) - Amsterdam (47 - under the second title), Baghdad (2959 - under the sixth title), Cairo (mīqāt 944 - under the first title, Fāḍil. maj. 47/1, mīqāt 194/1 - under the second half of the second title), Dublin (Beatty 4114 - under the second title), Fās (Zāwiya 5b - under the eighth title), Istanbul (SM AS 2843/2 - under the fourth title, Carullah 1279/33 - under the first title), Leiden (8418/5 - under the second title), Moscow (154/2 - under the second half of the second title), Oxford (I 879/1 - under the second title), Paris (2504/3 - under the third and fourth titles), Princeton (Garr. 967 - under the seventh title), St. Petersburg (B 3059/3 - under the first title), Tunis (Nat. 02103/1 - under the second title).

Edition of the Oxford manuscript with Latin translation by Colius: al-Farghānī [4]. Latin translations: by Johannes of Seville: al-Farghānī [1], the same translation edited by Regiomontans: al-Farghānī [2]; by Gherard

of Cremona: Campani [1] (53-171), by Christmanni from Hebrew translation by Jacob Anatoli: al-Farghānī [3]. Russian translation by Dobrovol'skiy (a fragment): al-Farghānī [6]. Partial edition of geographical section and Russian translation: Kalinina [3] (127-139). Research: Duhem [2] (II 204-206) (on precession), Campani [1] (on the influence on Dante), Kunitzsch [7], Dobrovol'skiy, Rosenfeld and Sergeyeva [1], (195-202), Toynbee [1] (on the influence on Dante), Wiedemann [167].

Book in 30 chapters: 1) calendar, 2-3) sphericity of the heaven and earth, 4) disposition of the earth at the center of the celestial movements, 5-7) inhabitant quater of the earth, 8) sizes of the Earth and planets, 9) countries and cities in seven climates, 10) risings of zodiacal signs, 11) day and night, 12) planetary spheres, 13) longitudinal movements of the Sun, the Moon and the stars, 14-15) longitudinal movements of planets, 16) epicycles and excenters, 17) periods of rotations of planets, 18) latitudinal movements of planets and stars, 19) fixed stars, 20) lunar stations, 21) distances of planets and stars from the Earth, 22) volumes of planets and stars, 23-26) risings and settings, 27) risings and settings of planets and stars, lunar phases, 28) lunar parallax, 29-30) Solar and Lunar eclipses. Russian translations and research by Dobrovol'skiy: al-Farghānī [9], (15-78, 191-208)

A2. The Perfect [Book] on the Construction of Northern and Southern Astrolabe by Geometry and Arithmetic (al-Kāmil fi ṣan`at al-asṭurlab al-shimālī wa'l-janūbī bi'l-handasa wa'l-ḥisāb) = Book on the Construction of Astrolabe (Kitāb fi ṣan`at al-asṭurlāb) = Perfect Book by al-Farghānī (al-Kitāb al-kāmil li'l-Farghānī) - Berlin (5790/1, 5791-5792), Cairo (mīqāt 103/2, 106/3 - anonymous fragments), Kastamonu (794/4), London (5479/2), Mashhad (5593), Paris (2456/5), Tehran (6411; Sipahsalar 702).

Desciption of the Berlin manuscripts: Ahlwardt [1] (226-227). German translation of the foreword: Wiedemann [157]. Photo-reproduction of a page: SSM (275). Russian translation by Sergeyeva: of chapter 1 - al-Farghānī [5], of fragments - al-Farghānī [6]. Research: Rosenfeld, Dobrovol'skiy and Sergeyeva [1] (203-209), Rosenfeld and Sergeyeva [1; 3-4], Sergeyeva [1-2], Sergeyeva and Karpova [1], [2] (English translation by Sh. Embleton).

Treatise in 7 chapters: 1) premises (theory of stereographical projection), 2) form of astrolabe, 3) circles on the plane of astrolabe, 4) tables of functions necessary for the construction of astrolabe, 5) construction of the Northern astrolabe, 6) construction of the Southern astrolabe, 7) impossible constructions. Russian translations and research by Sergeyeva: al-Farghānī [9], (81-190, 209-230)

A3. Book on Operations with the Astrolabe (Kitāb al-`amal bi'l-asṭurlāb) - Rampur (I 64).

A4. Tables of al-Farghānī (Jadwal al-Farghānī) - Patna (2580/8).

A4a. Tables of al-Farghānī for the Diameter of [the Circle of] Capricornius (Jadwal al-Farghānī `alā quṭr al-jady) - Manisa (1698/3) = A4?

A5. Chapter for Knowledge of Times when the Moon is over and under the Earth (Bāb fi ma`rifat al-awqāt allatī yakūnu al-qamar fīhā fawq al-arḍ aw taḥtahā) - Cairo (Fāḍil mīqāt 194/2).

A6. Calculation of Seven Climates (Ḥisāb al-aqālim al-sab`a) - Cairo Gotha (1523) - a fragment of A1.

A7. Book on Construction of Sundials (Kitāb `amal al-rukhāmāt) - Aleppo (Kaddur), Cairo (Kahrabai).

A8. Explanation of Reasons of the Zīj of al-Khwārizmī (Ta`līl fi'l-zīj al-Khwārizmī) - quoted in "Chords" (No 348, M4) of al-Bīrūnī.

G1. Names of Known Cities and Countries (asmā al-mudun wa'l-buldān al-ma`rūfa) - Tehran (Univ. 2031).

68. MUHAMMAD IBN AL-SABBAH

Muḥammad ibn al-Ṣabbāḥ (9th c.), astronomer and astrologer; the eldest of the Banū al-Ṣabbāḥ (see Nos 69 Ibrāhīm and 70 Hasan).

See: GAS (V 252-253, VI 148-149), KF (276), KF² (31), MAA (19), MAMS (II 58-59), TH (43-44).

A1. Construction of Hour [Lines on] Horizontal Plane by Geometry in Any Climate (`Amal al-sā`āt al-mabsūṭa bi'l-handasa fi ayy iqlīm aradta) - Istanbul (SM AS 4830/12).

A2. Book on Proof of the [Rules of] Construction of the Astrolabe (Kitāb al-burhān `alā ṣan`at al-asṭurlāb) - is mentioned in KF and in the mathematical treatise (No 174, M6) of Ibn Sinān, it shows that the work is a treatise on stereographical projection.

A3. Book on Operation of the [Determination] of Noon by one Measurement of Geometry (Kitāb `amal niṣf al-nahār bi-qaysa wāḥida bi'l-handasa). This work was started by Muhammad al-Sabbah and finished by his brother al-Hasan (No 70). Description of the manuscript: Sayılı [1] (67-68).

This work was initiated by Muḥammad al-Ṣabbāḥ and finished by his brother Ibrāhīm (No 69). It probably coincides with the Treatise on the Construction of Sundials (Risāla fi ṣan`at al-rukhāmāt) mentioned in KF.

KF also mentioned his astronomical works:

A4. Book on Testing the Position of the Sun, its Declination, Ortive Amplitude and the Size of its Movement (Risāla fī mauḍiʿ al-shams wa maylihā wa kammiyyat masīrihā) - is quoted in "Masʿudic Canon" (No 348, A1) by al-Bīrūnī [14] (366-368), in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (110), and in "Chords" (No 348, M4) by al-Bīrūnī (Suter [47] 48).

A5. [Treatise on Determining the Obliquity of Ecliptic] - is mentioned in "Chords" (No 348, M4) by al-Bīrūnī [23] (122).

69. IBRAHIM IBN AL-SABBAH

Ibrāhīm al-Ṣabbāḥ (9th c.), the middle Banū al-Ṣabbāḥ (see Nos 68 and 70), astronomer, mathematician and astrologer; he finished the work (No 68, A1) of Muḥammad ibn al-Ṣabbāḥ.

See: KF (276), KF² (31), MAA (19), MAMS (II 59), TH (43-44).

70. AL-HASAN AL-SABBAH

Al-Ḥasan ibn al-Ṣabbāḥ (9th c.), the youngest Banū al-Ṣabbaḥ (see Nos 68-69), astronomer, mathematician and astrologer, he finished the work (No 68, A2) of Muḥammad ibn al-Ṣabbāḥ.

See: GAS (V 252-253, VI 148-149), KF (276), KF² (31, 64), KZ (V 140), MAA (19), MAMS (II 60), TH (43-44); Tūqān [1] (265).

KF mentions his works:

M1. Book of Figures and Measures (Kitāb al-ashkāl wa'l-masā'iḥ).

A1. Book on the Globe (Kitāb fī'l-kura), is mentioned also in KZ.

A2. Book on Operations with the Armillary Sphere (Kitāb fī'l-ʿamal bi dhāt al-ḥalaq).

A3. The Inventive Zīj (al-Zīj al-mukhtarī) - is mentioned in the "Shadows" (No 348, A4) by al-Bīrūnī [47] (I 78).

71. AL-HARITH AL-KHURASANI

Al-Ḥarith al-Khurāsānī (9th c.) from Khurāsān, astrologer, friend of al-Ḥasan ibn Sahl, vizier of Caliph al-Ma'mūn.

See: GAS (VI 146), KF (278), KZ (I 382), MAA (19, 210), MAMS (II 60).

M1. Commentary on the book "Elements" of Euclid (Sharḥ kitāb al-Uṣūl li-Uqlīdis) - is mentioned in KZ.

A1. Zīj (Zīj) - is mentioned in KF.

72. ʿALI AL-TABARI

Abu'l-Ḥasan ʿAlī ibn Sahl Rabbān al-Ṭabarī (ca 800-864), son of Sahl Rabbān al-Ṭabarī (No 49); physician and astronomer; born in Iran, worked in Iraq.

See: GAL (I 231), GAS (III 236-240, VI 145-146), HMA (I 292-293), KF (296), MAMS (II 60-61), TH (231), UA (I 309); Meyerhof [6], Wüstenfeld [1] (I 55).

E1. Paradise of Wisdom (Firdaws al-ḥikma). Edition by Siddiqi: al-Ṭabarī [1]. Research: Meyerhof [7]. Astronomical chapters: al-Tabari [1] (19-23, 541-557). Survey of these chapters: GAS (VI 146).

73. KHURZAD IBN DARSHAD

Khurzād ibn Dārshād (9th c.), Persian astrologer, pupil of Sahl ibn Bishr (No 50), author of astrological works.

See: GAS (VII 129), KF (276), KF² (30), MAA (19-20), MAMS (II 61).

74. BANU MUSA

Mūsā ibn Shākir was a robber in Khurasan in his youth but later became a proficient astrologer. He was a favourite of Caliph al-Ma'mūn (No 32). After his death, al-Ma'mūn took care of his three young sons Muḥammad, Aḥmad, and al-Ḥasan and enrolled them in the House of Wisdom. Their education was entrusted to Yaḥyā ibn Abī Manṣūr (No 31). Soon the Banū Mūsā excelled in mathematics, astronomy, geometry and mechanics. They became the most active members of the House of Wisdom. Their knowledge of Greek scientific literature was perfect and they also led the astronomical observations in Baghdad and organized a

school of translators who rendered many Greek scientific manuscripts into Arabic. The astronomical observations of Muḥammad and Aḥmad Banū Mūsā in Baghdad and Samarra (the last observation in 860) are described in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (37, 64, 269). Among them, the eldest brother Abū Ja'far Muḥammad ibn Mūsā (d. 872) was the most famous; he and al-Hasan were specially interested in geometry. Ahmad was interested in mechanics, astronomy and geometry. All three were Thābit ibn Qurra's (No 103) teachers.

See: AGL (85), GAL (I 241), GAL² (I 382-383), GAS (V 246-252), VI 147-148, VII 129-130, 404), HD (280), HD² (188), IHS (I 260-261), KF (271), KF² (24), KWA (II 79), KZ (V 150, 633-634), MA (104-106, 123-124), MAA (20-21), MAA² (160-161), MAMS (II 61-64), SSM (33), TH (441-443); al-Dabbagh [4] (DSB), Farmer [4] (7), Hill [5] (EI²), [12] (ENWC), Pingree [68] (EIr), Qurbani [1] (56-62), Rashed [42], Rosenfeld and Yushkevich [9] (LM), Ruska [18] (EI), [27] (IA), Sabra [14] (GAC), Sayılı [18] (92-94), Steinschneider [8], Tekeli [10] (DSB), Tuqan [1] (187-194), Yaltkaya [1].

M1. Preface by Banū Mūsā to the Book of Apollonius on Conic Sections (Ṣadr li-Banū Mūsā li kitāb Abulūnyus fi'l-Makhrūṭāt) - Cairo (ʿaqaid 3626/33), Istanbul (SM AS 4832 II/32). Facsimile edition by Terzioglu - Banū Mūsa [2]. Edition and English translation by Toomer - Apollonius [3] (II 620-629). Research: Abdurahmanov and Ahmedov [1].

M2. Propositions which are needed to Simplify the Understanding of the Book of Apollonius on Conic Sections (al-Ashkāl allatī yuḥtāju ilayhā fī tashīl kitāb Abulūnyūs fi'l-Makhrūṭāt) - Istanbul (SM AS 2762), Mashhad (164/53), Oxford (I 385 - books V-VII, 943/5 - books I-VII), St. Petersburg (Univ. 185 - books III-IV).

M3. Book of the Knowledge of Measuring Plane and Spherical Figures (Kitāb ma'rifat misāḥat al-ashkāl al-basīṭa wa'l-kuriyya) - Ankara (Saib 4186/3), Berlin (5938, qu. 1867/130), Cairo (riyad. 898/25, Fāḍil riyāḍa. 4), Calcutta (Buhar 343/9), Florence (271/15, 286/16), Hyderabad (riyad. 383, 437, Salar riyad. 21, 32), Istanbul (Afif 1712/4; AM 769/13; Köprülü 930/14; SM AS 2760/19, Beşir 440/14, Carullah 1475/3, 1502/9, Esat 2034/2, Selim 743 1/8; TK 3453/13, 3456/15), Kabul (Matb. 14), Mashhad (5558), New York (Columb. 306/13), Oxford (I 960), Paris (2467/3), Rampur (411), Tabriz (1551), Tehran (209/3; Mu'tamid 120/12), Vienna (1209/13). All manuscripts were revised by al-Tūsī (No 606, M9). Edition of the revision (No 606, M9) by al-Ṭūsī : al-Ṭūsi [15] (No 2). Latin translation by Gherard of Gremona: Curtze [1], Latin and English translations: Clagett [5] (223-367). English translation of chapter on trisection of angle: Grant [2] (176-177). Russian translation of the revision of al-Ṭūsī by al-Dabbagh: Banū Mūsa [1]. Research: Carra de Vaux [6-7] (approximate calculations), al-Dabbagh [1], Kohl [2] (trisection of angle), Hultsch [1] (area of triangle), Suter [19].

M4. Reasoning of Aḥmad ibn Shākir on Trisection of an Angle (Qawl Aḥmad ibn Shākir fī tathlīth al-zāwiya) - Oxford (I 987/34, Thurst. 3/30). Construction of trisection of an angle by means of hyperbolas.

M5. Book on an Oblong Round Figure (Kitāb al-shakl al-mudawwar al-mustaṭil) - is mentioned in KF; al-Sijzī in his work (No 296, M1) on conic sections wrote that this treatise was about the ellipse and the method of an ellipse based on constancy of the sum of focal radius-vectors of its points (gardener's construction) was used, (see Woepcke [8] 223).

M6. Book on a Geometrie Proposition Proved by Galenus (Kitāb al-shakl al-handasī al-ladhī bayyanahū Jālīnūs) - is mentioned in KF.

M7. Revision of "Conic sections" of Apollonius (Islāḥ Kitāb al-Makhrūṭāt li-Abulūniyūs)- Edinburg (Univ. A 28), Istanbul (SM AS 2762) copied by Ibn al Haytham (No 328), Kandilli matem. 5), Oxford (885, 908, 943), Rampur (3655), Tehran (Malik 689). Edition of V-VII books with English translation by Toomer. Apollonius [3]. Facimile edition by NTMAM. Apollonius [4]

A1. Visibility of the Crescent According to the Opinion of Abū Ja'far Muḥammad ibn Mūsā ibn Shākir (Ru'yat al-hilāl 'alā ra'y Abī Ja'far Muḥammad ibn Mūsā ibn Shākir) - Bombay (86).

A2. Book of Degrees on the Nature of Zodiacal Signs (Kitāb al-darajāt fī ṭabāi' al-burūj) - Istanbul (NO 2800/11a), St. Petersburg (D 171/3). Description of the St. Petersburg manuscript: V. Rosen [1] (I 191); in the manuscript it is stated that this treatise is a translation from a Chinese work.

A3. Book on the Motion of Celestial Spheres (Kitāb ḥarakat al-aflāk) = Book of Astronomy (Kitāb al-hay'a) = Book on the First Motion of Celestial Sphere (Kitāb ḥarakat al-falak al-ūlā) by Muḥammad - Damascus (4489) under the second title, Oxford (I 879/2) under the third title, is mentioned in KF under the first title. A fragment is included in the work (No 668, A4) of al-Shīrāzī. The Oxford manuscript is ascribed to Qusṭā ibn Lūqā (No 118), but Saliba [24] proved its coincidence with the Damascus manuscript. Edition of the fragment included in (No 668, A4): Saliba [24] (130-136, even pp.). English translation of this fragment: Saliba [24] (131-137, odd pp.). Research: Saliba [24]. The fragment published by Saliba contains a critique of the Ptolemaic system of the Universe: unlike Ptolemy who explained the "first" (daily) motion of heaven by the

ninth sphere enveloping spheres of the Sun, the Moon, 5 planets, and fixed stars, Muḥammad ibn Mūsā denies the existence of the ninth sphere and explains the daily motion of heaven by the rotation of the totality of 8 spheres.

KF mentions their following astronomical works:

A4. Book on the Mathematical Proof by Geometry that outside the Sphere of Fixed, there is not a Ninth Sphere (Kitāb bayyana fīhī bi ṭarīq ta`līmī wa madhhab handasī annahū laysa fī khārij kurat al-kawākib al-thābita kura tāsi`a) - by Aḥmad.

A5. Book on the Beginning of the World (Kitāb fī awwaliyyat al-`ālam) - by Muḥammad.

A6. Book on a question proposed by him to Sanad ibn `Alī (Kitab al-mas`ala allatī alqāhā `alā Sanad ibn `Alī) - by Aḥmad; on a question discussed by him and Sanad ibn `Alī (No 48).

A7. Question Discussed between Aḥmad and Sanad ibn `Alī (Kitāb al-mas`ala <allati> jarat bayna Sanad wa bayna Aḥmad) - on another question discussed by Aḥmad ibn Mūsā and Sanad ibn `Alī.

A8. Zīj (al-Zīj), written by Aḥmad, is quoted in the zīj (No 283, A1) by Ibn Yūnis [1] (149, 151).

A9. [Zīj] written by the three Banū Mūsā, is quoted in the same zīj (No 283, A1) by Ibn Yūnis [1] (59, 79, 153, 155, 163).

A10. Book on Solar Year (Kitāb fī' sanat al-shams) - is mentioned in the treatise (No 103, A7) by Ibn Qurra as the prototype of this treatise.

A11. Book on the Construction of Astrolabe (Kitāb fī `amal al-asṭurlāb) - is quoted by al-Bīrūnī in his "Astrolabes" (No 348, A4); see GAS (VI 147).

Me1. Book of Mechanics (Kitāb al-ḥiyal) - Berlin (5562), Cairo (Taymūr Ṣinā`a 69), Gotha (1349), Istanbul (TK A 3474 - incomplete, anonymous), Rome (Vat. 317/1). Edition by al-Hassan: Banū Mūsa [4]. English translations: by Hill - Banū Mūsa [3]. German translation of the chapter on a hydraulic device: Wiedemann [24] (342-346). Research: Hauser, Wiedemann [24] (on the mentioned device), [28] (2-16 - general survey), [30] (200-205 - on lamps), Wiedemann and Hauser [3] (on vessels), Bir [1]. Description of 100 mechanical and hydraulic devices and lamps.

Me2. Book on Lever Balance (Kitāb fī'l-qarasṭūn) - is mentioned in KF. Treatise on Roman lever balance "charistion" (hence Arabic term qarasṭūn).

75. NU`AYM IBN SHAKIR

Nu`aym ibn Muḥammad ibn Mūsā ibn Shākir (9th c.), mathematician; Banū Mūsā's (No 74) grandson (from his eldest son).

M1. Book on Geometric Propositions (Kitāb fī'l-ashkāl al-handasiyya) - Istanbul (Univ. 314/8). The manuscript was copied by al-Tūsī (No 606).

76. `AMR AL-JAHIZ

Abū `Uthmān `Amr ibn Bakr al-Jāḥiẓ (767-868) (jāḥiẓ = goggle-eyed), from Basra, grandson of a Black African, Muslim philosopher-mu`tazilite, pupil of al-Naẓẓām (No 60), the founder of a direction in mu`tazilism, al-jāḥiẓiyya; naturalist, worked in Basra, Baghdad and Samarra.

See: AGL (123-126), GAL (I 158-169), GAL² (I 239-247), GAS (III 386-375, VII 240-241), HMA (315), IHS (I 597), KZ (I 205, II 81, III 121-122, 270, 353, 391, 402, IV 109, V 44, 52, 111, 115, 143, 413, VI 361, 380), MAMS (II 64-65, III 362), PI (I 239-310, II 352-353), STMI (552-553); Anonymous [2] (EI), Baranov [1], Farmer [4] (6-7), al-Fahuri [1], Hirschfeld [3], Pellat [1], [5] (EI²), [7], Plessner [9] (DSB), Sandubi [1], Van Vloten [1], Yaqūt (VI 56-80), Zwettler [1] (GAC). Selected works: al-Jāḥiẓ [10b, 15].

E1. Book on Quadrature and Rounding (Kitāb al-tarbī` wa'l-tadwīr) - Berlin (5032), Damascus (7014/2), London (1129/3, 3138/3). Editions: al-Jāḥiẓ [2] (68-167), [4] (82-147), [7] (187-240), Pellat [4] (1-105). French translation by Addad: al-Jāḥiẓ [12]. Research of the question on mirrors: Wiedemann [93]. Pamphlet about a Meccan bookseller, containing 127 questions related to various sciences.

Z1. Book on Animals (Kitāb al-ḥayawān), the most popular work. Editions: al-Jāḥiẓ [3, 13]. Reproductions of illustrations: Löfgren [1]. Research: Asin Palacios [6], Kopf [1], Wiedemann [62], Wilson [1].

Z2. Reasoning on Mules and their use (al-Qawl fī'l-bighāl wa manāfi`hā). French translation by Pellat: al-Jāḥiẓ [10].

PH1. Explanation and Demonstration (al-Bayān wa'l-tabyīn). Edition by Sandubi: al-Jāḥiẓ [5].

PH2. Philosophical Treatises. Edition of 11 treatises: al-Jāḥiẓ [4]. Edition of 3 treatises by Finkel: al-Jāḥiẓ [6], edition by Sandubi: al-Jāḥiẓ [7]. Edition of a collection of treatises by Kraus and Hajiri: al-Jāḥiẓ [8]. German translations of extracts from treatises and their research. O. Rescher [4].

PH3. Book of the Crown on Ethic of Kings (Kitāb al-tāj fī akhlāq al-mulūk), edited by Ahmed Zeki Pasha, 1914. French translation by Pellat: al-Jāḥiẓ [14].

L1. Book on Misers (Kitāb al-bukhalā). Editions by Van Vloten and Hajiri: al-Jāḥiẓ [1, 9]. Translations: French by Pellat: al-Jāḥiẓ [10], Russian by Baranov: al-Jāḥiẓ [11]. Research: Baranov [1].

77. HUNAYN IBN ISHAQ AL-`IBADI

Abū Zayd Ḥunayn ibn Isḥāq al-`Ibādī (809-873), born in Hira, came from the Christian (Nestorian) Arab tribe `ibād ('slaves [of God]) established near Hira, son of an apothecary; physician and translator from Greek into Syriac and Arabic; pupil of Ibn Māsawayh (No 65). He worked in Gundishapūr and later in Baghdad as the physician of Caliph al-Mutawakkil. Slandered by rivals, he was imprisoned and died there. In Europe he was known as "Joannitius".

See: GAS (III 247-256, V 405-406, 408, 410, VI 89, 105, VII 134, 261-267, 327-328, IX 232-233), HD (171), IHS (I 611-613), KZ (I 381, 446, II 96-98, 619, V 36, 77, 137, 164-166, 247, 320, 385-386, 514, 516, VI 50, 97), MAA (21-23), MAMS (II 65-66), SSM (34), STMI (83), TH (171-177), UA (I 184-188); Anawati and Iskandar [1] (DSB), Baumstark [1] (227-230), Bayhaqi [5] (30), Bergsträsser [1, 3], De Young [4], Iskandar [4] (ENWC), Farmer [4] (7-8), G. Gabrieli [5], Sam. Hamarneh [4], Hibbi [1], Meyerhof [2], Moussa [1], Ruska [15a], L. Sa`di [1], Safa [1] (63-70, 333-340), Samarra`i and al-`Aluji [1], Strohmaier [1] (EI²). On medical works of Hunayn ibn Isḥaq, besides GAS (III 247-256), see Meyerhof and Prüfer [1-2], Prüfer and Meyerhof [1], Sbath and Meyerhof [1].

A1. Treatise on Comets and on Miracles mentioned about Comets (Risāla fī dhawāt al-dhanā'ib wa mā dhukira fīhā min `ajāib) - Cairo (Fadil mīqat 204/6, Ṭal`at mīqāt 157/4), Oxford (Marsh. 618/7), Rabat (Zaydaniyya 9023/1), Tunis (Nat. 18104). Photo-reproduction of two pages of a Cairo manuscript: SSM (300).

KF mentions his two astronomical works:

A2. Book on Actions [Related to] the Sun and the Moon (Kitāb fī `amal al-nayyirayn).

A3. Book on Meteors (Kitāb fī shuhūb).

Ph1. Book on Colours (Kitāb al-alwān) - is mentioned in KF.

Ph2. Book on Rainbow (Kitāb fī quzaḥ) - is mentioned in UA.

ME1. [Book of Questions about the Eye] - edition and English translation by Meyerhof: H. `Ibādī [3]. French translation: Sbath and Meyerhof [1]. Medieval Latin translation: H. `Ibādī [1].

ME2. [Ten treatises on the Eye] - edition and French translation by Sbath and Meyerhof: H. `Ibādī [2]. Research of questions of the theory of vision: Lindberg [6] (33-42).

Mt1. Exposition of the Book on Heavenly Traces by Aristotle (Jawāmi` li kitāb Arisṭūṭālis fī`l-āthār al-`ulwiyya) -Mosul (Ahmad 154), Tehran (1562). Edition: Deiber [1] (29-63, odd pp.), German translation: Deiber [1] (28-62, even pp.). Research: Deiber [1].

KF mentions his two meteorological works:

Mt2. Book on Ebbs and Flows (Kitāb fī'l-madd wa'l-jazr).

Mt3. Book on the Cause why Seawater Became Salty (Kitāb fī'l-sabab alladhī ṣārat lahū miyāh al-baḥr māliḥa).

78. MUHAMMAD AL-MAKKI

Muḥammad ibn `Alī al-Makkī (9th c.) from Mecca, astronomer and astrologer. Al-Bīrūnī [31] (269) in "Geodesy" (No 348, G3) informs that al-Makkī observed an equinox in Nishapūr in 852 .

See: GAS (VI 139-140, VII 124), MAMS (II 66).

A1. Book on the Proof of the Spherical Shape of Heaven and Earth (Kitāb fī'l-ḥujja `alā istidārat al-samā` wa'l-arḍ) - is mentioned in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (67, 177, 226).

A2. Introduction to the Art of Prediction (al-Madkhal ilā ṣinā`at al-aḥkām) - is mentioned in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (67, 79).

79. YA`QUB AL-KINDI

Abu Yusuf Ya`qub ibn Isḥāq ibn al-Ṣabbāḥ al-Kindī (d. ca 873), born in Basra, from the Arab tribe Kinda; worked in Baghdad under Caliphs al-Ma'mun and al-Mu`taṣim, and continued under al-Mutawakkil. He was a scholar-encyclopaedist known as "Philosopher of Arabs" (faylasuf al-`Arab). In medieval Europe, he was known as "Alkindus".

See: GAL (I 230-231), GAL[2] (I 372-374), GAS (III 244-247, 375-376, V 255-259, VI 151-155, VII 130-134, 241-261, IX 232, X), HD (273), HD[2] (179), HMA (I 160-168), IHS (I 559-560), KF (255-261), KF[2] (10), KZ (I 389, 486, II 5, 296, III 96-98, 365, 372, V 51, 152, 271, 274, VI 68), MAA[2] (161), MAMS (II 66-74, III 362), SSM (34), PI (IV 3-6), STMI (474), TH (366-378), UA (I 206-207); al-Ahwani [1, 3], Atieh [1], [2] (ENWC), `Awwad [3], `A. al-`Azzawi [2], Baldi [1] (433-437), al-Bayhaqi [5] (39), de Boer [2], [3] (90-97), [5] (EI), [8] (IA), Burnett [1-2], Farmer [4] (8-10), Flügel [1], Garro [1], Guidi and Walzer [1], Sam. Hamarneh [1], Haqqi Isma`il [1], Haschmī [1-2], Janmatoba [1-3], Jolivet [1-2], Jolivet and Rashed [1] (DSB), [3] (EI[2]), Kapp [1] (I 163-164), Loth [2], MacCarthy [1], Martin [1] (GAC), Meyerhof [2] (145), [3] (405), Mieli [2] (80-82), Nagy [1], Neuwirth [1], Nurjan [1], Quadri [2] (58-70), Radev [1] (39-44), Rashed [34, 38], N. Rescher [14], Ritter [1], Rosenthal [2, 5], Ruska [15b], Saghadeyev [2], Tuqan [1] (166-176), Turayhi [2], Ueberweg [1] (303-304), al-`Ukaylı [1], Ülken [4] (94-102), Wiedemann [20, 44, 126, 132].

M1. Treatise on Determining Headen Numbers (Risāla fī istikhrāj al-a`dād al-muḍmara) - Istanbul (SM AS 4830/3).

M2. Treatise on Intuitive Explanation of [Determination of] Distances between an Observer and the Bases and Tops of Mountains, and of Determination of Depths of Wells, Widths of Rivers, and others [by Means of a Device] called Khurīsṭis (Risāla fī iḍā ḥ wijdān ab`ād mā bayna al-nāẓir wa marākiz a`midat al-jibāl wa `uluww a`midatihā wa `ilm `umq al-ābār wa `urud al-anhār wa ghayr dhālika wa hiya tusammā khurīsṭis) - Istanbul (MS AS 4830/13, 4832 II/31) - treatise on measurements by means of a device with the Greek name "horistes"(determining boundaries)

M3. Revision of the Introduction to the Book of Euclid (tarjamat ṣadr kitāb Uqlīdis) - Istanbul (SM AS 2458), probably coincides with the Treatise on Aims of the Book of Euclid (Risāla fī aghraḍ kitāb Uqlīdis) mentioned in KF.

M4. Letter to Aḥmad ibn al-Mu`taṣim on the Round Form of Elements and the Farthest Body (Risāla ilā Aḥmad ibn al-Mu`taṣim fī anna al-`anāṣir wa'l-jirm al-aqṣā kuriyyat al-shakl) - Istanbul (SM AS 4832/17). English translation: Khatchadourian and Resher [1].

M5. Treatise on the Cause why Ancient [Philosophers] Related Five Solids to Elements (Risāla fī'l-sabab alladhī lahu nasaba al-qudamā' al-ashkāl al-khamsa ilā'l-usṭuqsāt) - Istanbul (SM AS 4832/11). "Five solids" are five regular polyhedra, tetrahedron, cube, octahedron, icosahedron, and dodecahedron (ancient philosophers) - Plato and philosophers of his school, who believed that atoms of four elements, fire, earth, air, and water have the forms of tetrahedron, cube, octahedron respectively, and whole world has the form of dodecahedron (hence medieval Arabic names of these polyhedra, jism al-nār - "body of fire", jism al-arḍ - "body of earth", jism al-hawā' - "body of air", jism al-mā' - "body of water", and jism al-falak - "body of heaven").

M6. Construction of a Direction on a Sphere (`Amal al-samt `alā al-kura) - Berlin (oct. 2294/3). German translation: Luckey [4] (191-193). Research: Luckey [4] (109-116), [7]. Here "sphere" is a spherical sundial, that is, a hollow metallic sphere with holes for the rays of the Sun. These holes correspond to definite hours. Places of these holes are described in the treatise.

M7. Construction of a Sundial by Geometry (A`māl al-rukhāma bi'l-handasa) - Berlin (oct. 2294/2). German translation: Luckey [4] (193-199). Research: Luckey [4] (109-114, 116-131), [7].

M8. [Treatise on the Divisibility of Magnitudes to Infinity and on Parallel] is quoted by al-Bīrunī in the supplement to "Chords" (No 348, M4). Research: Bulgakov and Ahmedov [1]. Al-Kindī in his Book A1 on the Greatest Art mentions his following mathematical treatise:

M9. Book of Data (Kitāb al-mu`ṭayāt) - see Rosenthal [4] (443).

M10. Book on Sphere and Solids whose Science is related with his Science on Sphere and on Principles [of this Science] near the Principles of Planes (Kitāb fī'l-kura wa mā ittaṣala `ilmuhu bi `ilmihā min al-mujassamāt wa awā'il qarība min al-basīṭāt) - see Rosenthal [4] (440-441).

M11. Book on the Motion of a Sphere (Kitāb fī ḥarakat al-kura) - see Rosenthal [4] (441).

M12. Book of Introduction to [the Science of] Number (Kitāb al-madkhal ilā al-`adad) - see Rosenthal [4] (441-443).

KF mentions his following mathematical treatises:

M13. Book on the Use of Hindu Number (Kitāb fī isti`māl al-`adad al-hindī) = Treatise on the Use of Hindu Arithmetic (Risāla fī isti`māl al-ḥisāb al-hindī) - see Rosenthal [4] (441).

M14. Book on the Use of Measurement Number (Kitāb fī isti`māl al-`adad al-qiyāsī) - see Rosenthal [4] (441).

In treatises M13 and M14 "Hindu number" is an integer number and "measurement number" is a generalization of integer number for fractional or even for real numbers which appear in measurements.

M15. Treatise on Introduction to Arithmetics (Risāla fī'l-mudhkhal ilā'l-arithmāṭīqī). Treatise in 5 books, apparently it was a revision of the "Introduction to Arithmetics" of Nicomachus.

M16. Treatise on Explanation of the Numbers Mentioned by Plato in his Book Republic (Risāla fī'l-ibāna `an al-a`dād allatī dhakarahā Aflāṭūn fī kitābihī al-siyāsa). Treatise on so-called "marriage number" of Plato.

M17. Treatise on Harmony of Numbers (Risāla fī ta`līf al-a`dād).

M18. Treatise on Unity from the Viewpoint of a Number (Risāla fī'l-tawḥīd min jihat al-`adad).

M19. Treatise on Lines and Multiplication by a Given Number (Risāla fī'l-khuṭūṭ wa'l-ḍarb bi-`adad al-sha`ir).

M20. Treatise on an Added Quantity (Risāla fī'l-kammiyya al-muḍāfa).

M21. Treatise on Numerical Ingenious Manners and on Science of their Refining (Risāla fī'l-ḥiyal al-`adadiyya wa `ilm iḍmāriha).

M22. Treatise on Improvement of the Book of Euclid (Risāla fī iṣlāḥ kitāb Uqlīdis).

M23. Treatise on Approximation in the Reasoning of Archimedes on the Ratio of a Diameter of a Circle to Its Circumference (Risāla fī taqrīb qawl Arshimīdis fī qadr quṭr al-dā'ira ilā muḥīṭihā). Treatise on Archimedes' approximation of (p) π.

M24. Treatise on the Construction of a Figure of two Means (Risāla fī `amal shakl al-muwassaṭayn). Treatise on the construction of two mean proportionals.

M25. Treatise on Approximation of a Chord of a Circle (Risāla fī taqrīb watar al-dā'ira).

M26. Treatise on Approximation of a Chord of a Ninth [of a Circle] (Risāla fī taqrīb watar al-tus`) - on construction of the side of a regular nonagon. In TH (371) it is called Treatise on Approximation of a Seventh [of a Circle] (Risāla fī taqrīb watar al-sub`).

M27. Treatise on Measurement of a Hall (Risāla fī misāḥat aywān) - on measurement of a plane figure, probably of a figure consisting of a rectangle and two semicircles.

M28. Treatise on Division of a Triangle and a Square (Risāla fī taqsīm al-muthallath wa'l-murabba` wa `amalihimā) - probably near the 7th and 8th chapters of the geometric treatise by al-Farabī (No 180, M2).

M29. Treatise on Property of Construction of a Circle Equal to the Surface of a Given Cylinder (Risāla fī kayfiyyat `amal dāira musāwiyya li-saṭḥ usṭuwāna mafrūḍa).

M30. Treatise on Division of a Circle (Risāla fī qismat al-dāira).

M31. Treatise on the Improvement of the Fourteenth and Fifteenth Books of the Work of Euclid (Risāla fī al-maqāla al-rābi`a `ashara wa'l-khāmisa `ashara min kitāb Uqlīdis). Note that Books XIV and XV of Euclid's "Elements" were written by other mathematicians.

M32. Treatise on a Geometric Proof of Facts in Astronomical Calculations (Risāla fīl-barāhīn al-misāḥiyya limā ya`raḍu fī'l-ḥisābāt al-falakiyya).

M33. Treatise on the Construction of Astrolabe by Means of Geometry (Risāla fī ṣan`at al-asṭurlāb bi'l-handasa) - is mentioned in KZ (III 366). Treatise on stereographical projection.

M34. Treatise on Spherical Figures (Risāla fī'l-kuriyyāt).

M35. Treatise on the Projection of a Sphere onto a Plane (Risāla fī tasṭīḥ al-kura).

M36. Treatise that Sphere is the Greatest among Corporal Figures and that Circle is the Greatest among all Plane Figures (Risāla fī anna al-kura a`ẓam al-ashkāl al-jirmiyya wa'l-dāira a`ẓam min jamī` al-ashkāl al-basīṭa) - solution of the isoperimetric problems on sphere as the solid of greatest volume from all solids with equal surfaces and on circle as the plane figure of greatest area from all figures with equal perimeters.

M37. Treatise on the Determination of Short Distances on Mountains (Risāla fī ma`rifat ab`ād qalīla li'l-jibāl).

A1. Book on the Greatest Art (Kitāb fī'l-ṣinā`a al-`uẓma) - Istanbul (SM AS 4830/2). Edition by al-Sayyid Ahmad: al-Kindī [13]. Research: Rosenthal [4].

A2. Treatise on Determining Distances by Triqueter (Risāla fī istikhrāj al-ab`ād bi dhāt al-shu`batayn) - Leiden (199/4). German translation: Wiedemann [39] (661-666).

A3. Treatise on Finitude of the Body of the Universe (Risāla fī tanahī jirm al-`ālam) - Istanbul (SM AS 4832 II/2). English translation: N. Rescher and Khatchadourian [1]. Edition, French translation and research: al-Kindī [15] (157-165). Research: Garro [2], Khatchadourian and N. Rescher [1], N. Rescher and Khatchadourian [2].

A4. Treatise on the Construction of Horary [Lines] on Tympanum Located on a Plane Parallel to the Horizon, Better than Other [Lines] (Risāla fī `amal al-sā`āt `alā safīha tunṣabu `alā'l-saṭḥ al-muwāzī li'l-ufq khayr min ghayrihā) - Oxford (I 941). Edition by Zakariyā Yūsuf: al-Kindī [7].

A5. Treatise on Armillary Sphere (Risāla fī dhāt al-ḥalaq) - Paris (2544/9).

A6. Explanation of an Instrument Called Armillary Sphere which Ptolemy had Mentioned at the Beginning of the Fifth Book of "Almagest" (Sharḥ al-āla al-ma`rūfa bi dhāt al-ḥalaq allatī dhakarahā Baṭlamyūs fī awwal al-qawl al-khāmis min kitāb al-Majisṭī) - Dublin (Beatty 5254).

A7. Treatise on Stars (Risāla fī'l-nujūm) - Aleppo (Hakim 994).

A8. Treatise on the Cause of Time Differences in a Year (Risāla fī `illa ikhtilāf al-azmān fī'l-sana) - Aleppo (Hakim 992).

A9. Book on the Determination of Ascents of Planets at the Beginning of their Knots and their Descents (Kitāb fī ma`rifat ṣu`ūd al-kawākib fī ru'ūs jawzahirātihā wa hubūṭihā minhā) - Cairo (Fadil mīqat 1/2).

A10. Treatise on Prognostifications by Eclipses (Risāla fī'l-qaḍā' `alā'l-kusūf) - Cairo (`aqā'id 3626/28), Istanbul (SM AS 4832/27).

KF mentions his following astronomical works:

A11. Treatise on Determining the Distance of the Center of the Moon from the Earth (Risāla fī istikhrāj bu`d markaz al-qamar min al-arḍ) - is quoted also in "Shadows" (No 348, A4) by al-Bīrūnī [49] (I 268).

A12. Treatise on Celestial Phenomena (Risāla fī ẓāhirāt al-falak).

A13. Treatise on Constellations (Risāla fī'l-ṣuwar).

A14. Treatise on the Astronomical Art of Ptolemy (Risāla fī ṣinā`at Baṭlamyūs al-falakiyya).

A15. Treatise on the Impossibility of Infinite Body of the World (Risāla fī annahū lā yumkinu an yakūna jirm al-`ālam bilā nihāya).

A16. Book on the Impossibility of Measurement of the Farthest Celestial Sphere by the Method of [Other] Celestial Spheres (Kitāb fī imtinā` wujūd misāḥat al-falak al-aqṣā al-mudabbar li'l-aflāk).

A17. Treatise on Geometric Determination of Hour [Lines] on a Hemisphere (Risāla fī istikhrāj al-sā`āt `alā niṣf kura bi'l-handasa). Treatise on hemispherical sundials.

A18. Treatise on Information on Distances of [Celestial] Bodies [from the Earth] -(Risāla fī akhbār ab`ād al-ajrām).

A19. Treatise on Objections to Manicheans on Ten Questions on Positions of Celestial Spheres (Risāla fī'l-radd `alā'l-manāniyya fī'l-`ashara masāil fī mawḍū`āt al-falak).

A20. Treatise on the Farthest World (Risāla fī'l-`ālam al-aqṣā).

A21. Treatise on the Construction of [an Instrument Consisting of] Six Rings and its use (Risāla fī `amal al-ḥalaq al-sitta wa isti`mālihā).

A22. Treatise on Temporal Ratios (Risāla fī'l-nisab al-zamāniyya).

KZ (II 296) mentions his astronomical work:

A23. Movements of Planets (Tasyīrāt al-kawākib). On al-Kindī's astrological works see GAS VII (131-134) and Burnett [1-2].

KF mentions his following geographical works:

G1. Treatise on Geometric Determination of the Meridian and the Direction to Qibla (Risāla fī istikhrāj khaṭṭ niṣf al-nahār wa samt al-Qibla bi'l-handasa).

G2. Treatise on Distances between the Boundaries of Climates (Risāla fī ab`ād masāfāt al-aqālīm).

G3. Treatise on Settlements (Risāla fī'l-masākin).

G4. Great Treatise on the Inhabited Quarter [of the Earth] (al-Risāla al-kubrā fī'l-rub` al-maskūn).

Ph1. Improvement of Optics (Iṣlāḥ al-manāẓir) - Cairo (riyad. 40/2), Manchester (350/4), Paris (2467/2), all three manuscripts are fragments. French translation and research of (b): al-Kindī [15] (1-117). Edition: al-Kindī [14]. German translation: Wiedemann [30] (248). Research: Lindberg [4, 6, 8-10].

Ph2. Solar Rays (al-Shu`ā`āt al-shamsiyya) - Patna (2048). Edition: al-Kindī [14]. Research: M. Ahmad [1].

Ph3. On Rays (De Radii). Only the medieval Latin translation is extant. Editions: d'Alverny and Hudry [1], al-Kindī [14]. Research: Federici Vescovini [1] (44-47).

Ph4. On Rays of Stars (De Radii Stellarum). Only the medieval Latin translation is extant. Edition: al-Kindī [14].

Ph5. Book on Causes of Distinction of Vision and their Geometric Proofs (Liber de causis diversitatum aspectus et dandis demonstratibus geometricis super eas) = On Vision (De aspectibus). Only the Latin translation of Gherard of Cremona is extant. Editions: Björnbo and Vogl [1], al-Kindī [14]. Research: Federici Vescovini [1] (47-52), Lindberg [4-5], [6] (18-32), Wiedemann [30] (245-247), [157].

Ph6. Commentary on Book of Optics of Euclid (Sharḥ kitāb al-Manāẓir li-Uqlīdis). Edition: al-Kindī [14]. Research: Rashed [48].

Ph7. Treatise on the Cause of the Blue Color which is Seen in the Air on the Side of the Heaven (Risāla fī `illat al-lawn al-azraq alladhhī yurā fī'l-jaww fī jihat al-samā) - Istanbul (SM AS 4832/2), Oxford (I 877/13). Editions: al-Kindī [14], Spies [2]. English translation: Spies [2].

Ph8. Treatise on the Cause of the Assertion that Fire, Air, Water and Earth Are Elements of All Extant and Disappearing and on Their Pecularity in Comparison with Remaining Extant (Risāla fī'l-`illa allatī lahā qīla anna al-nār wa'l-hawā wa'l-mā` wa'l-arḍ `anāṣr li jamī` al-kāina al-fāsida wa ḥuṣṣa bi-dhālika dūna ghayrihā min al-kā'ināt) - Istanbul (SM Laleli 2487/4).

Ph9. Treatise on the Proof that the Nature of Celestial Spheres Differs from the Nature of Four Elements and is a Fifth Substance (Risāla fī'l-ibāna anna ṭabī`at al-falak mukhālifa li-ṭabī`at al-`anāṣir al-arba`a wa annahā ṭabī`a khāmisa) - Istanbul (SM AS 4832/3).

Ph10. Treatise on Burning Mirrors (Risāla fī'l-marāyā al-muḥriqa) - is mentioned in KF (261). English translation by Hashmī: al-Kindī [10].

KF (256) mentions his following works on physics:

Ph11. Treatise on the Wonders in the Outermost Body (Risāla fī `ajīb al-jirm al-aqṣā li'l-bariyya).

Ph12. Book on the Impossibility of Change in the Outermost Body (Kitāb fī imtinā` al-jirm al-aqṣā min al-istiḥāla).

Ph13. Treatise on the Sphericity of the Surface of Seawater (Risāla fī anna saṭḥ mā' al-baḥr kurrī).

Ph14. Treatise on Astronomical Optics (Risāla fī'l-manāẓir al-falakiyya).

Ph15. [Treatise on Shadows] - is quoted in "Shadows" (No 348, A4) by al-Bīrūnī [46] (I 49, 60-61).

Me1. Treatise on Balance (Risāla fī'l-awzān) - is mentioned in KZ (III 372).

Mt1. Treatise on Actual Cause of Ebbs and Flows (Risāla fī'l-`illa al-fā`ila li'l-madd wa'l-jazr) - Oxford (I 877/12). German translations: Wiedemann [44] (36-37) - partial, [175] (375-387) – complete.

Mt2. Treatise on the Cause of Snow, Hail, Lightning, Thunderstorms, Thunder, and Icy Cold (Risāla fī `illat al-thalj wa'l-bard wa'l-barq wa'l-ṣawā`iq wa'l-ra`d wa'l-zamharīr) - Istanbul (SM AS 4832/13).

Mt3. On Rains, Heavy Showers, and Winds and on Changes of Air (De pluviis, imbricus et ventis ac aëris mutatione). Only the Medieval Latin translation is extant. Edition: al-Kindī [1].

Mu1. Treatise on Melody and Tone (Risāla al-laḥn wa'l-nagham) - Manisa (1705/7). Facsimile edition of the manuscript, French translation, and research: Shiloah [2].

Mu2. Treatise on Experience of Composition of Melodies (Risāla fī khubr ta`līf al-alḥān) - London (Sup. 823). Edition by al-Hafni and German translation by Lachmann: al-Kindī [2].

Mu3. Treatise on Important Parts of [the Theory of] Music (Risāla fī ajzā` khabariyya fī'l-mūsīqā) - Berlin (5503).

KF mentions his following musical works:

Mu4. Great Treatise on Harmony (al-Risāla al-kubrā fī'l-ta'līf).

Mu5. Treatise on Introduction to the Art of Music (Risāla fī'l-madkhal ilā ṣinā`at al-mūsīqā).

Mu6. Treatise on Rhythm (Risāla fī'l-īqā`).

Mu7. Treatise on Division of Canon (Risāla fī qismat al-qānūn) - probably, a revision of "Division of Canon" of Euclid.

Mi1. Letter to Some Brethren on Swords (Risāla ilā ba`ḍ ikhwānihī fī'l-suyūf) - Berlin (5354), Gotha (1912), Istanbul (SM AS 4832/12). Edition by Dabbud: al-Kindī [8]. Partial German translation Wiedemann [42] (116-120).

ME1. Pharmacopoeia (Aqrābādhīn). English translation by Levey: al-Kindī [9].

ME2. Book on the Knowledge of Possibilities of Composed Medicines (Kitāb fī ma`rifat quwwat al-adwiya al-murakkaba). Facsimile edition of a manuscript and research: Gauthier [2a].

Ch1. Book of Chemistry of Perfumes and Distillations (Kitāb kimiyā al-iṭr wa'l-taṣ`īdāt). German translation by Garbers: al-Kindī [4].

PH1. Philosophical Treatises: a) Treatise on the Number of Books of Aristotle and What Is Needed to Learn Philosophy (Risāla fī kammiyyat kutub Arisṭuṭālis wa mā yuḥtāju ilayhī fī tahṣīl al-falsafa, b) Letter to al-Mu`taṣim billāh on the First Philosophy (Kitāb ilā al-Mu`taṣim billāh fī'l-falsafa al-ūlā) - the letter to Caliph al-Mu`taṣim on Aristotle's Metaphysics, c) Book on Five Essences (Kitāb fī māhiyyāt khamsa), d) Treatise on the Explanation of the Efficient Proximate Cause of Generation and Corruption (Risāla fī'l-ibāna `an al-`illa al-

fā`ila al-qarība li'l-kawn wa'l-fasād), e) Definitions and Descriptions of Things (Fī ḥudūd al-ashyā` wa rusūmihā). Edition by Abū Rīda: al-Kindī [5]. Edition by al-Ahwani of (b): al-Kindī [3]. Edition by Ivry of (b) with English translation: al-Kindī [11]. French translation of five treatises: al-Kindī [11b]. Italian translation of three treatises of al-Kindī by Veccia Vaglieri and Celentano: al-Kindī [11a]. Russian translation of (a-d) by Saghadeyev: al-Kindī [6], Russian translation of (e) by Janmatova : al-Kindī [12]. Research of (b): Akhwani [1]. Research of (e): T. Frank [1].

PH2. Philosophical Treatises: a) Treatise on the Quiddity of Intellect and Its Explanation (Risāla fī ma'hiyyat al-`aql wa'l-ibāna `anhā), b) Treatise on the Quiddity of Sleep and Dreams and how a Soul is Marked. (Risāla fī `illat al-nawm wa'l-ru'ya wa mā tarmuzu bihī al-nafs), c) Treatise on Five Directions (Risāla fi'l-aṣwāb al-khamsa) (five "directions" are matter, form, motion, place, and time), d) Treatise on Ten Categories (Risāla fi'l-maqūlāt al-`ashara) - treatise on Aristotle's ten categories. Edition of medieval Latin translations and research: Nagy [1]. Research of (a): Jolivet [1]. Research of questions of physics in (c): Federici Vescovini [1] (41-43). Research of elements of mathematical logic: Garro [1]. Research of al-Kindī's classification of sciences: Cortabarria Beitia [1].

PH3. Treatise on the Speech on Soul, Shortened from Books of Aristotle, Plato and Other Philosophers (Risāla fi'l-qawl fi'l-nafs al-mukhtaṣara min kitāb Arisṭū wa Aflaṭūn wa sā'ir al-falāsifa). Italian translation: Furlani [1]. Research: Genequand [1].

80. AHMAD IBN AL-DAYA

Abū'l-Ḥasan (Abū'l-Ḥusayn) Aḥmad ibn Yūsuf ibn Ibrāhīm ibn al-Dāya (796-878), from Baghdad, foster-brother of Caliph al-Mu`tasim (ibn al-dāya = foster-mother's son); historian, mathematician, and astronomer; worked in Baghdad and Damascus. He was the author of commentary on Ptolemy's astrological work "Centiloquium".

See: GAS (I 373-374, II 544-545, III 231), KZ (I 184, 191, III 639), MAA(42-43), MAMS (II 74), SSM (39); Rosenthal [8] (EI²), Steinschneider [9].

HS1. Information on Astronomers (Akhbār al-munajjimīn) - is mentioned in KZ (I 191).

HS2. Information on Physicians (Akhbār al-aṭibbā) - is mentioned in KZ (I 184).

M1. Treatise on Ratio and Proportion (Risāla fi'l-nisba wa'l-tanāsub) - Cairo (Fāḍil riyāḍa. 39/1).

81. MUHAMMAD AL-MARWARRUDHI

Muḥammad ibn Khālid ibn `Abd al-Malik al-Marwarrūdhī (9th c.), astronomer; son of Khālid al-Marwarrūdhī (No 42).

See: MAA (26), MAMS (II 74), TH (281).

82. MUHAMMAD AL-MAHANI

Abū `Abdallāh Muḥammad ibn `Īsā al-Māhānī (d. ca 880), mathematician and astronomer.

See: GAL (I 383), GAS (V 260-262, VI 155-156, VII 404), IHS (I 597), KF (266-271), KF² (16-25), KZ (I 382, 390), MA (82-84), MAA (22-27), MAMS (II 74-76), TH (284); Dold-Samplonius [3] (DSB), [19] (ENWC), Kapp [1] (III 60-61), Qurbani [1] (63-69), Rosenfeld [48], Tuqan [1] (177).

M1. Treatise on Ratio (Risāla fi'l-mushkil min amr al-nisba) = Book on Ratio (Kitāb al-nisba) - Berlin (6009/1), Hyderabad (riyad. 332/3), Istanbul (SM Carullah 1502/5), Paris (2467/16). St. Petersburg (A 285/3), Tehran (Sipahsalar 597), Vienna (1324/4).

Partial English translation of the Paris manuscript: Plooij [1].

Commentary on Book V of Euclid's "Elements". Critique of Euclid's definition of ratio and proportion. It is given (with a reference to Ibn Qurra, (No 103) another definition of equality of ratios based on the Euclid algorithm (this definition was proposed in antiquity by Thaetetus but Euclid preferred the definition of Eudoxus and the Thaetetus definition was forgotten). Research: Vahabzadeh [2].

M2. Commentary on the Tenth Book of the Work of Euclid (Tafsīr al-maqāla al-`āshira min kitāb Uqlīdis) - Paris (2457/39) - a fragment. Description of the manuscript: Woepcke [8] (669). Russian translation: Matviyevskaya [4] (273-280), [5] (196-199), [19] (9-11, 13-14). Commentary on Book X of Euclid's "Elements". Development of Euclid's classification of irrationals. Unlike Euclid who classified only quadratic and biquadratic irrationals, al-Māhānī also classifies cubic irrationals.

M3. Book on the Twenty Sixth Proposition of the First Book of Euclid which Contains no Requisite for a Contradiction (Kitāb fī sitta wa`ishrīna shakl min al-maqāla al-ūlā min Uqlīdis allati lā yuḥtāju fī shay` minhā ilā al-khulf) - is mentioned in KF.

M4. [Commentary on the second book of the work "On Sphere and Cylinder" by Archimedes]. Commentary: (No 277, M6) by al-Kūhī. Khayyām in his algebraic treatise (No 420, M2) states that in this treatise al-Māhānī composed a cubic equation and tried to solve it.

M5. Improvement of the Book of Menelaus on Spherical Figures (Iṣlāḥ kitāb Manālāwus fī'l-ashkāl al-kuriyya) - is quoted in the work (No 271, M1) by al-Harawī. Partial German translation and research: Krause [2] (25-32).

A1. Book on Determining the Azimuth at any Hour and in any Place (Maqāla fī ma`rifat al-samt li-ayy sā`a aradta wa fī ayy mawḍi` aradta) - Istanbul (TK 3342/3). Description of the manuscript: SHIM (450). German translation of the problem indicated in the title of the treatise: Luckey [4] (200). Research: Luckey [4] (113, 126a), [7]. Geometric construction of the arc of the Sun by means of "geometric trigonometry" according to the rule of treatise (No 41, A6) of al-Khwārizmī analogous to the construction in the treatise (No 41, A8).

A2. Treatise on Latitudes of Stars (Risāla fī `urūḍ al-kawākib) - is mentioned in KF.

83. AL-DARIR AL-JURJANI

Abū Sa`īd al-Ḍarīr al-Jurjānī (9th c.) from Gurgan (al-ḍarīr = blind), pupil of Ibn al-`Arabī (No 40).

See: GAS (V 263-264, VI 159), IHS (I 562), MAA (27), MAMS (II 76-77), SSM (36); Flügel [4] (147).

M1. Geometric Problems (Masā'il handasiyya) - Berlin (IGMN I 23), Cairo (Fāḍil riyāḍa 41/9).

Research: Hogendijk [41].

Description of the manuscripts: Ruska and Hartner [1] (168-169).

M2. [Geometric Treatise] - is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (Nos 1, 40, 57). German translation of these fragments: by Suter [47] (13, 15), Russian translations by Bulgakov - al-Bīrūnī [50] (30, 38), by Krasnova - al-Bīrūnī [23] (95, 102-103). Research: Hogendijk [41].

A1. Book on Determining the Meridian from the Book "Analemma" and its Proof (Kitāb istikhrāj khaṭṭ niṣf al-nahār min kitāb Anālīmā wa'l-burhān `alayhi) - (IGMN II 30), Cairo (Fāḍil riyāḍa. 41/25). German translation: Schoy [18] (265-271). Commentary on "Analemma" of Ptolemy.

84. HILAL AL-HIMSI

Hilāl ibn Abī Hilāl al-Ḥimsī (d. ca 880) from Hims (ancient Emessa), Syria, translator from Greek into Arabic, worked under the supervision of Ibn Mūsā ibn Shākir (No 74), translated Books I-IV of "Conic Sections" of Apollonius.

See: GAL^2 (I 383), GAS (V 254), IHS (I 598), KZ (III 97), MAA (27), MAMS (II 77), TH (62), UA (I 204); Tuqan [1] (210).

85. AL-HUSAYN AL-ADAMI

Abū `Alī al-Ḥusayn ibn Muḥammad al-Ādamī (9th c.), astronomer.

See: KF (280), KF^2 (36), MAA (27), MAMS (II 77), TH (182).

A1. Book on Drawing Hour [Lines], on Deflection on Walls [Vertical] and Shadows and on Distances of Azimuths (Kitāb takhṭīṭ al-sā`āt wa inḥirāf al-ḥīṭān wa'l-ẓilālāt wa ab`ād al-sumūt) - Paris (2506/1). Description of the manuscript: Ruska and Hartner [1] (202-204).

Al-Bīrūnī in "Astrolabes" (No 348, A5) writes that al-Ādamī was the first scholar to construct a "disc of eclipses", see Suter and Wiedemann [1] (84).

86. ABU JA`FAR IBN HABASH

Abū Ja`far ibn Aḥmad ibn `Abdallāh ibn Ḥabash (9th c.) astronomer and constructor of astronomical instruments; son of Ḥabash al-Ḥāsib (No 46).

See: GAS (VI 188), KF (288), KF^2 (30, 64), MAA (27-28), MAMS (II 77-78), TH (396); Pingree [42] (EIr).

A1. Book on the Construction of the Flat Astrolabe (Kitāb `amal al-asṭurlāb al-mubaṭṭaḥ) - Paris (2457/30)).

A2. Book on Plane Astrolabe (Kitāb al-asṭurlāb al-musaṭṭaḥ) - is mentioned in KF.

87. MUHAMMAD AL-SAMARKANDI

Muḥammad ibn Aḥmad ibn Yūsuf al-Samarkandī (9th c.), astronomer; Ibn Yūnis in his zīj (No 283, A1) mentions al-Samarkandī's astronomical observations in Samarkand in 865-866.

See: GAS (VI 161-162), MAA (28), MAMS (II 78); Abdullayev and Hikmatullayev [1] (11), Ibn Yūnis [1] (150, 152, 166), Voronovskiy [1] (106).

A1. Zīj (Zīj) - is mentioned in the Zīj (No 283, A1) by Ibn Yūnis [1] (151, 153, 167).

88. ABU MA`SHAR JA`FAR AL-BALKHI

Abū Ma`shar Ja`far ibn Muḥammad ibn `Umar al-Balkhī (ca 786-886), famous astrologer, born in Balkh, worked in Baghdad, died in Wasit. He was the author of many astrological works and was known as "Albumasar" in medieval Europe. The most notable astrological work ascribed to him "Prediction of Changes of Years and Births" (Aḥkām taḥwīl sinī al-mawālid) was translated into Latin by Johannes of Seville: Abū Ma`shar [1] also into Byzantine Greek: Abū Ma`shar [2], as it was proved by Loth [2], indeed it was written by al-Kindī (No 79).

See: GAL (I 250-251), GAL2 (I 394-396), GAS (V 274-275), VI 156-157, VII 139-151, 328-329), HD (273), HD2 (178), IHS (I 568-569), KF (240-241, 177), KF2 (31), KWA (I 112), KWA2 (I 325), KZ (I 147, 171, 198, 229, 283, II 46, III 554, 558, V 50, 94, , 136, 475, VI 242), MAA (28-30), MAA2 (162), MAMS (II 78-79, III 362), PL (II 39-41, 492), SSM (35-36), STMI (286), TH (153); Baldi [1] (437-443), Dunlop [11], Federici Vescovini [3], Harthner [9, 19], Kunitzsch [8, 21], Lemay [1-2, 5], [6] (ENWC), Millas Vallicrosa [12] (EI2), Pingree [9] (DSB), [45] (EIr), Shangin [1], Suter [25] (EI), Thorndike [1] (I 649-652), [2].

M1. Book on Amicable Numbers and Their Properties (Maqāla fī'l-a`dād al-mutaḥābba wa khawāṣṣihā) - Cairo (Ṭabī`iyāt 124/5).

M2. Treatise on Numbers of a Magic Square (Risāla dar wafq-i a`dād) P - London (487/1).

A1. Book of the Zīj of Thousands (Kitāb Zīj al-hazārāt) - Paris (2581), is quoted in "Chronology" and "India" by al-Bīrūnī (No 348, E1, E2). "Hazārāt" is the Arabic plural of Persian "hazār" (thousand). Research: Kennedy and Van der Waerden [1], Pingree [1], Van der Waerden [4] (the heliocentric system).

A2. Book on Sciences of Stars (Kitāb fī `ulūm al-nujūm) = Introduction to the Science of Stars (Madkhal `ilm al-nujūm) - Istanbul (Köprülü 344), Jerusalem (145), Mashhad (5382, 5399, 5620), St. Petersburg (B 307), Tehran (Mahdawi 482/28; Mu`tamid 213). Description of the Tehran manuscripts: Farzana Pur and Danish-Pazhuh [1] (238). Editions: Abū Ma`shar [1, 3]. Research: Hartner [9] (influence on Tycho Brahe), Hermelink [4], Lemay [1-2], Vernet [15].

A3. Short Introduction (al-Madkhal al-Ṣaghīr) - Cairo (falak 8527), London (Sup. 7490/5), Paris (2696/2). Latin translation by Adelard of Bath and research: Burnett, Yano, and Yamamoto [1].

A4. [Great Introduction to the Science of Predictions of Stars]. Edition of Lemay of a Medieval Latin translation: Abū Ma'shar [4].

A5. Treatise on Conjunctions (Risālat al-qirānāt) = Book on Conjunctions (Kitāb al-qirānāt) - Cairo (lughat 4458/4, Ṭal`at mīqāt 93/1, 96). Persian version: Cairo (Tal`at maj. farisi 21/12).

A6. Book of Predictions of Conjunctions of Stars and Twelve Zodiacal Signs (Kitāb aḥkām al-qirānāt wa'l-kawākib wa'l-burūj al-ithnay `ashara) - Cairo (Ṭal`at mīqāt 111, 157/1).

A7. Book on Predictions of Stars and [Their] Connections (Kitāb fī aḥkām al-nujūm wa ittiṣālātihā) - Cairo (Ṭal`at mīqāt 161/1).

A8. Book of Indications of Conjunctions and Connections of Stars with some other Stars (Kitāb dalāil al-qirānat fī'l-burūj wa ttiṣālāt al-kawākib ba`ḍahā bi ba`ḍ) - Cairo (mīqāt 884, Ṭal`at mīqāt 161/2).

A9. Book on Mysteries of Stars (Kitāb asrār al-nujūm) = Star Mysteries (al-Asrār al-nujūmiyya) - Cairo (ḥurūf 80/2, Fāḍil mīqāa 204/4, 248/2, Ṭal`at mīqāt 157/1, Ṭal`at falak fārisī 4/2), Escorial (918/8).

A10. Book of Mysteries of the Knowledge on Edges of Interiors (Kitāb al-asrār fī ma`rifat aḍlā` al-ḍamāir) - Cairo (falak 3774/3, mīqat 884, Taymūr riyāḍa 141/1).

A11. Book of Mystery (Kitāb al-sirr) - Cairo (Fadil mīqat 204/5).

A12. Book of Nativity (Kitāb al-mawālīd) - Cairo (Fāḍil mīqat 204/5).

A13. Concise [Book] on the Science of Stars (Mukhtaṣar dar `ilm-i nujūm) P - Tashkent (3887/3).

A14. Book on Disasters (Kitāb al-qawārī`) - Cairo (ḥurūf 25).

A15. Explanation of Hours in the Night and Day (Dar bayān-i sā`āt-i shab u rūz) P - Cairo (maj. farisi 22).

A16. [Note on Determining the Visibility of the Crescent] - Cairo (mīqāt 926/2), London (Sup. 9599).
A17. Book on Predictions of Stars (Kitāb aḥkām al-nujūm) - Cairo (Fāḍil mīqāt 248/2).
A18. Merw Events on Byzantine Months (al-Mulḥamāt al-Marwiyya `an al-shuhūr al-rūmiyya) P - Aligarh (Azad. Sul. 578/24).
A19. Small Zīj (al-Zīj al-Ṣaghīr) = Zīj of Conjunctions and Penetrations (Zīj al-qirānāt wa'l-ikhtirāqāt) - is mentioned in TH, see Pingree [4] (2), [9] (38).
A20. Book on the Form of Celestial Sphere and Distinctions in its Ascents (Kitāb al-hay'at al-falak wa ikhtilāf ṭulū`ihī) - is mentioned in KF (277).
A21. Book on Times (Kitāb al-awqāt) - is mentioned in KF (277).
A22. Book on [Determining] the Time by Stars of Twelve [Zodiacal Signs] (Kitāb al-awqāt `alā ithnay `ashariyyat al-kawākib) - is mentioned in KF (277).
A23. Book of Distinction of Zījes (Kitāb ikhtilāf al-zījāt) - is mentioned in KF (240-241).

89. ABU SA`ID SHADHAN

Abū Sa`īd Shādhān ibn Baḥr (9th c.), astrologer, pupil of Abū Ma`shar Umar al-Balkhī (No 88).
See: GAS (VII 15), TH (444); Federici Vescovini [3], Thorndike [2].
A1. Book of Talks on Mysteries (Kitāb al-mubāhasāt fī'l-asrār) - is quoted by al-Bīrūnī in "Chronology" (No 348, E1).

90. MUHAMMAD IBN AKTHAM

Muḥammad ibn Yaḥyā ibn Aktham (9th c.), son of judge Abū Muḥammad Yaḥyā ibn Aktham from Basra. Calculator; he worked under Caliph al-Ma'mūn.
See: GAS (V 273-274), KF (282), KF² (38, 71), MAA (30), MAMS (II 79), TH (287), Tuqan [1] (266).
M1. Book of Numerical Problems (Kitāb masā'il al-a`dād) - is mentioned in KF.

91. `ABDALLAH AL-DANDANI

Abū `Alī `Abdallāh ibn `Alī al-Dandānī (9th c.), Christian astrologer, author of a book on astrology.
See: GAS (VII 110), KF (280), KF² (36), MAA (30), MAMS (II 79), TH (221).

92. `ABBAS IBN FIRNAS

Abū'l-Qāsim `Abbās ibn Firnās al-Takurunnī (d. 887), poet, astronomer, and naturalist, worked in Cordoba at the court of Umayyad Caliphs; was known as the "sage man of Andalucia" (ḥakīm al-Andalus). He was the constructor of an original horary instrument, he also manufactured glass. He is said to have accomplished a flight successfully.
See: GAS (II 674-675, VI 158), MAMS (II79-80); al-Ḍabbī [1] (418), Terez [1-2].

93. MUHAMMAD AL-SAYMARI

Abū'l-`Anbas Muḥammad ibn Isḥāq ibn Ibrāhīm al-Ṣaymarī (826-888) from Kufa; poet, mathematician, astronomer, and astrologer. He was a judge in Saymar near Basra.
See: GAL (I 396), GAS (V 262, VII 152-153), KF (151, 173, 278, 358), KF² (33), MAA (30-31), MAMS (II 80), SSM (36); al-Bayhaqi [5], Pingree [38] (EIr), Ullmann [2] (325-326).
M1. Book of Intellectual Geometry (Kitāb handasa al-`aql) - is mentioned in KF. According to the geometric treatise of Treatises of Ikhwān al-Ṣafā' (No 226, M2) "intellectual geometry" is the continuous geometry of Euclid's "Elements", unlike "sensual geometry", that is atomistic geometry.
A1. Zīj (al-Zīj) - Bursa (Genel 2012/4).
A2. Book of Introduction to the Art of Stars (Kitāb al-madkhal ilā ṣinā`a al-nujūm) - Berlin (5711, 5898), London (Sup. 775), Milan (C 81).
A3. Book on Astronomical Calculation (Kitāb fī'l-ḥisāb al-nujūmī) - Bursa (Genel 2102/2), Rome (Vat. 957).

A4. Book of Principle of Principles on the Nature of Zodiacal Signs and Stars, All Their Positions and Indications (Kitāb aṣl al-uṣūl fī ṭabī`at al-burūj wa'l-kawākib wa jamī` ḥalātihā wa dalā'ilihā) - Cairo (falak 3790/2, mīqat 11, 108, Ṭal`at mīqāt 110). Description of the manuscript Cairo mīqat 11: Kunitzsch [1] (9-10).

94. `ABDALLAH IBN QUTAYBA AL-DINAWARI

Abū Muhammad `Abdallāh ibn Muslim ibn Qutayba al-Dīnawārī (828-889), born in Baghdad or Kufa; was a judge in Dinawar, later worked in Baghdad; historian, grammarian and astrologer.

See: GAL (I 125-127), GAL² (I 184-187), GAS (III 376-377, IV 344, VII 350-351, VIII 161-165, IX 154-158), IHS (I 615-616), KWA² (II 22), KZ (I 195, 213, 222, 327, 446, II 105, 167, 174, 385, 396, 417, 577, 635, III 30, 172, 237, 303, 617, IV 144, 287, 325, V 43, 54, 78-79, 159, 162, 462, 560, 609), MAA (31), MAMS (II 80-81), SSM (36); Brockelmann [13] (EI), [18] (IA), I. Huseini [1], Kunitzsch [12] (DSB), Lecomte [1], [2] (EI²).

A1. Book on the Science of Celestial Spheres (Kitāb fī `ilm al-falak) - Oxford (I 1000).

A2. Book on Anwā' (Kitāb al-anwā') - Baghdad (Museum Aluci 8640/1), Cairo (mīqāt 1080, Zaki 239), Oxford (I 1033). Edition: Ibn Qutayba [7]. French translation: Pellat [3]. Description: KZ (V 54).

A3. Science of the Observation of Stars (`Ilm manāẓir al-nujūm) - is quoted by al-Bīrūnī in "Chronology" (No 348, E1).

Me1. Book of Mechanics (Kitāb al-ḥiyal) - is mentioned in KZ (V 78-79).

Mt1. Book on Winds (Kitāb al-riyāḥ) - is mentioned in KF.

H1. Sources of Information (`Uyūn al-akhbār), his main historical work. Editions: by Bodenheimer and Kopf - Ibn Qutayba [6], by Brockelmann - Ibn Qutayba [3]. Other edition: Ibn Qutayba [8]. Research: Wiedemann [61].

H2. Book of Knowledge (Kitāb al-ma`ārif) - history from the creation of the world. Edition by Wüstenfeld: Ibn Qutayba [1]. Other edition: Ibn Qutayba [9].

L1. Book on Poetry and Poets (Kitāb al-shi`r wa'l-shu`arā). Editions by Rittenshansen and de Goeje: Ibn Qutayba [2, 5].

95. YA`QUB AL-QASRANI

Abū Yūsuf Ya`qūb ibn `Alī al-Qaṣrānī al-Qarshī (9th c.), astronomer and astrologer, pupil of Abū Ma`shar `Umar al-Balkhī (No 88).

See: GAL² (I 392), GAS (VII 138-139), KF (284), KF² (41), KZ (I 198, V 517), MAA (31), MAMS (II 81), SSM (34), TH (264).

A1. Book of Questions on the Science of Predictions of Stars (Kitāb masā'il fī `ilm aḥkām al-nujūm) - Berlin (5877), Cairo (falak 3757, mīqat 30-31, 410, Fāḍil mīqāt 13/1, 247, Ḥalīm mīqāt 2/1, Ṭal`at mīqāt 105, 147, 148/1, 247), Istanbul (BU Veliyuddin 2285; NO 2807; SM Damad 846, Hamidiye 821-822; TK 3492), Leiden (157), Mashhad (5622), Oxford (I 996). Descriptions: KZ (I 198, V 517). Treatise in 20 chapters.

96. MUHAMMAD IBN SAM`AN

Muḥammad ibn `Abdallāh ibn Sam`ān (9th c.), astronomer and astrologer, pupil of Abū Ma`shar `Umar al-Balkhī (No 88).

See: GAS (VII 153), KF (279), KF² (34), MAA (31), MAMS (II 81).

A1. Book of Introduction to the Art of Stars (Kitāb al-madkhal ilā ṣinā`at al-nujūm) - is mentioned in KF.

97. ABU HANIFA AL-DINAWARI

Abū Ḥanīfa Aḥmad ibn Dāwūd ibn Wanand al-Dīnawārī (ca 820-895), famous linguist, historian, naturalist, philosopher, mathematician, and astronomer; worked in Isfahan and Dinawar; made astronomical observations in Isfahan in 849-850.

See: GAL (I 123), GAS (IV 338-343, V 262-263, VI 158-159, VIII 158-170), HMA (298-300), IHS (I 615), KF (78), KZ (I 329, II 105, III 63, 470, 558, V 54, 67, 103, 130, 162, 169, 308), MAA (31-32), MAA² (162), MAMS (II 81-82); Lewin [1] (EI²), Qurbani [1] (70-72), Sayılı [18] (95), Wensinck [2] (EI).

KF mentions his following mathematical works:

M1. Book on Algebra and Almucabala (Kitāb al-jabr wa'l-muqābala). See also KZ (III 63, V 67).

M2. Book of Board on Hindu Reckoning (Kitāb al-takht fī ḥisāb al-hind). "Board" in this treatise is a reckoning board covered by dust.

M3. Book of Rarities of Algebra (Kitāb al-nawādir al-jabr).

M4. Book on Legacy (Kitāb al-waṣāya).

M5. Book of Calculations of Circularity (Kitāb ḥisāb al-dawr). On "calculations of circularity" see chapters 24-27 of the book (No 41, M3) of al-Khwārizmī.

A1. Zīj (Zij) - is mentioned in KZ (III 470, 558) and was critized by al-Ṣūfī [1] (No 212).

A2. Book on Qibla and Noon (Kitāb al-Qibla wa'l-zawāl) - is mentioned in KF.

A3. Book on Eclipses (Kitāb al-kusūf) - is mentioned by Yāqūt [2] (I 127).

PH1. Book on Time and Space (Kitāb al-azmina wa'l-amkina). Edition: Abū Ḥanīfa [3].

B1. Book on Plants (Kitāb al-nabāt). Partial editions by Lewin and Hamidullah: Abū Ḥanīfa [4-6]. Partial English translation by Yff Breslin Abū Ḥanīfa [7].

H1. Book of Long Histories (Kitāb al-akhbār al-ṭiwāl) - his main historical work. Editions by Guirgass and Krachkovskiy: Abū Ḥanīfa [1-2].

98. MUHAMMAD AL-KILAI

Muḥammad ibn ʿAbd al-Barr al-Kilāʿī (ca 815-896) from Jayyan (Jaen, Spain), arithmetician, knowledgeable in inheritance.

See: MAA (32), MAMS (II 82); Ibn al-Faraḍī [1] (I 315).

99. ABU BAKR AL-HASAN IBN AL-KHASIB

Abū Bakr al-Ḥasan ibn al-Khāṣib or al-Khāṣibī (9th c.), astrologer of Persian origin, author of many astrological works. In Medieval Europe he was known as "Albubather Alchasibi filius".

See: GAS (VII 122-124), IHS (I 503), KF (276), KF² (31), KZ (II 571, V 472), MAA (22-23), MAA² (162), MAMS (II 82-83), TH (175).

A1. Fragment Related to the Visibility of the Crescent (Nubdha fī mā yataʿallaqu bi-ruy'at al-hilāl) - Tarim (al-Ribat 99/3).

A2. Introduction to the Science of Stars (al-Madkhal ilā ʿilm al-nujūm) - is mentioned in KZ (V 472).

A3. Great Collection (al-Jāmiʿ al-kabīr) - is mentioned in KZ (II 571).

A4. Astrological Work – Medieval Latin translation (Abu Bakr /1/)

100. AHMAD AL-SARAKHSI

Abū'l-ʿAbbās Aḥmad ibn Muḥammad ibn Marwān al-Sarakhsī (d. 899), known also as Aḥmad ibn al-Ṭayyib, from Sarakhs, Khurasan (now in Turkmenistan), philosopher, physician, mathematician, and astronomer. He was the pupil of al-Kindī (No 79) and the teacher of Caliph al-Muʿtaḍid.

See: GAS (III 259, V 263, VI 162-163, VII 137, 269, IX 23), HD (282), HD² (185), HMA (I 294-296), KF (261), KF² (21), KZ (I 224, 502, II 5, III 66, 385, 393, 413, 416, 438, 528, 640, IV 415, 439, 447, V 33, 38, 46, 58, 67, 104, 111, 117-118, 120, 143, 161, 165-167, 169, 472, 475, 509, VI 98, 334), MAA (33), MAMS (II 83-84), TH (77-78), UA (I 214); Farmer [11] (11-12), Rosenthal [1, 4], Tuqan [I] (184), Ülken [4] (117-118).

KF mentions his mathematical works:

M1. Book on Arithmetic on Numbers, Algebra, and Almucabala (Kitāb al-arithmāṭiqā fī'l-aʿdād wa'l-jabr wa'l-muqābala);

KZ (V 38, 67) mentions two separate works: Book on Arithmetic (Kitāb al-arithmāṭiqā) and Book on Algebra and Almucabala (Kitāb al-jabr wa'l-muqābala)

M2. The Great Book of Malpractices and The Great Art of Arithmetic (Kitāb al-aghshāsh al-kabīr wa ṣināʿat al-ḥisāb al-kabīr);

KZ (III 66, V 46) mentions two separate works: The Great [Book of] Ḥisba (al-Ḥisba al-kabīr) and The Book of Malpractices (Kitāb al-aghshāsh).

M3. The Little Book of Malpractice on the Art of Arithmetic (Kitāb al-ʿghushsh fī ṣināʿat al-ḥisāb al-ṣaghīr); KZ (III 66) calls this work The Little [Book of] Ḥisba ([Kitāb] al-Ḥisba al-Ṣaghīr).

A1. Introduction to the Art of Stars (al-Madkhal ilā ṣinā`at al-nujūm) = Introduction to the Science of Stars (al-Madkhal ilā `ilm al-nujūm) - Baku (B 1130/2), is quoted and critized in "Chronology" (No 348, E1) by al-Bīrūnī [2] (129).

A2. Book on Distinction of Zījes (Maqāla fī ikhtilāf al-zījāt) - is quoted in the work (No 487, A1) of al-Samaw'al, see Rosenthal [4].

KZ mentions his work on physics:

Ph1. Treatise on Particle Which is [Not] Divisible to Infinity (Risāla fī anna al-juz` yatajazza' ilā mā lā nihāya lahu).

KF also mentions his works on music:

Mu1. Introduction to the Science of Music (al-Madkhal ilā `ilm al-mūsīqā).

Mu2. The Great Work on Music in Two Books (Kitāb al-mūsīqā al-kabīr maqālatān).

Mu3. The Small Book on Music (Kitāb al-mūsīqā al-ṣaghīr).

Mu4. Delightful Reflections of a Man who is Awake (Nuzhat al-mufakkir al-sāhir) - is mentioned in KZ as the book on music, written for Caliph al-Mu`taḍid.

PH1. Foundations of Philosophy (Arkān al-falsafa) - is mentioned by al-Bīrūnī in "Shadows" (No 348, A4).

101. ABU `ALI IBN ABI QURRA

Abū `Alī ibn Abī Qurra (9th c.), astronomer and astrologer, worked in Basra.

See: GAS (VI 171), KF (278), KF²(34), MAA (33-34), MAMS (II 84-85), TH (409).

A1. Book on the Cause of Solar and Lunar Eclipses (Kitāb al-`illa fī kusūf al-shams wa'l-qamar) - is mentioned in TH. This book was written for al-Muwaffaq, brother of Caliph al-Mu`tamid (870-892).

102. HARUN IBN ABI MANSUR

Abū `Abdallāh Hārūn ibn `Alī ibn Yaḥya ibn Abī Manṣūr (d. 901), grandson of Ibn Abī Manṣūr (No 31); astronomer, worked in Baghdad.

See: GAS (VI 216); KF (144), KWA (II 194), KWA² (III 604), MAA (34), MAMS (II 85), TH (338).

A1. Zīj of Hārūn (al-Zīj al-Hārūnī) - is quoted in "Shadows" (No 348, A4) by al-Bīrūnī [46] (I 196).

103. THABIT IBN QURRA

Abū'l-Ḥasan Thābit ibn Qurra al-Ḥarrānī al-Ṣābī' (836-901), born in Harran (now in Southern Turkey), came from the heathen sect of Harranites; descendants of the ancient nation of Mitanni whose religion was close to the religion of Babylonians. Like Babylonians, Harranites were star worshippers. Since al-Qur'an admitted a sect called sabians (al-Ṣābi'a) besides the Jews and Christians, the Harranites called themselves Sabians. Thabit ibn Qurra studied astronomy and mathematics at Harran. He excelled as a philosopher, physician, astronomer and mathematician. He belonged to the study circle that evolved from the Christian philosophical and medical school in Alexandria, which first moved to Antiochia and later to Harran. In his youth Ibn Qurra was a moneychanger at Harran where he met Muḥammad ibn Mūsā (No 74), who impressed by his knowledge of languages, invited him to Baghdad. There he studied under the guidance of three Banū Mūsā and became a great scholar of mathematics and astronomy. Ibn Qurra worked in Baghdad and Samarra at the courts of Caliphs al-Mu`tamid and al-Mu`taḍid (892-902). Ibn Qurra's native language was Syriac but he also knew Greek and Arabic. He wrote in Syriac and Arabic and was the translator and commentator of many Greek and Syriac works. Archimedes' "Lemmas", "On Heptagon", and "On Tangent Circles", and books V-VII of Apollonius' "Conic Sections" are extant only in his translations (see Apollonius [3] and Nix. [1]). He also translated "Introduction to Arithmetic" of Nicomachus [1].

See: GAL (I 241-244), GAL² (I 384-386), GAS (III 260-263, 377, V 264-272, 402, VI 163-170, VII 151-152, 268-270, 404-405, X), HD (281), HD² (184), HMA (I 163-172), IHS (I 599-600), KF (272), KF² (25), KWA (I 100), KWA² (I 283), KZ (I 381-383, II 5, 123, 134, 213, III 98, 438, 620, V 66, 112, 140, 144, 148, 154, 161-164, 247, 351, 385-386), MA (114-115, 123-128, 172-175), MAA (34-38), MAA² (115-122), MAA³ (171), MAMS (II 85-103, III 362), SSM (37-38), STMI (355-356), 385-386), TH (115-122), UA (I 215-220); Baldi [1] (443-447), al-Bayhaqi [5] (31-32), Berggren [10] (104-106), Carmody [5], Chwolsohn [1] (I 546-567), Delambre [1] (73-75), Farmer [11] (22-23), Kapp [1] (II 58-66), Krafft [6] (GWG), Mieli [1] (86-87), Morelon [1, 2], Rashed [42], Rosenfeld [23] (SeT), [41], [61] (ENWC), Rosenfeld and Grigorian [1] (DSB), Rosenfeld and Khayretdinova [1], Ruska [20] (EI), [28] (IA), al-Sabī' [1], Sabra [16] (GAC), Safa [1] (75-78,

348-352), Sansour [1-2], Sansour and Bokatuyeva [1], Schloming [1], Steinschneider [5], Tuqan [1] (195-205), Van der Waerden [3] (15-23), Wiedemann [76], Zillu-rahman [2].

Collection of Papers: "Ibn Qurra" [1], I-II.

M1. Revision of the book "Elements (Işlāḥ Kitāb al-Uṣūl)=Book of Elements of Geometry of Euclid (Kitāb uṣūl al-handasa li-Uqlīdis) - Escorial (907), Istanbul (SM Fatih 3439), Kabul (Ma`arif 297), Kastamonu (607), Oxford (I 919, 958), Paris (2500), Rabat (Malik 1101, Hasan 53), Rampur (3656), St. Petersburg (C 1245), Tehran (200; Malik 3586; Univ. 2120). Revision of the translation of Euclid's "Elements" made by Isḥāq ibn Ḥunayn al-`Ibādī (No 114). Latin translation by Gherard of Cremona: Busard [10]. Descriptions: KZ (I 381-383). Research; Murdoch [4], Rosenfeld and Khayretdinova [1] (48-49).

M2. Exposition of Euclid by Thābit (Taḥrīr Uqlīdis li-Thābit) - Oxford (II 280). Description of the manuscript: Nicoll and Pusey [1] (260-262). A variant of M1, but in the foreword al-Khāzin (No 194), Ibn Sīnā (No 317), and al-Naysabūrī(No 159) and al-Khayyām (No 420) are mentioned.

M3. [Revision of] The Book of Elements of Geometry by Archimedes (Kitāb fī uṣūl al-handasa li Arshimīdis) - Aligarh (Azad. Sul. 152/12), Patna (2468/29). Editions: Ibn Qurra [3] (No 1). Archimedes [5] (III 333-340). Translations into ancient and modern Greek: Archimedes [5] (IIII 177-217). Spanish translation: Vernet and Catala [4]. Russian Translation by Rosenfeld: Ibn Qurra [10] (26-33). Research: by Rosenfeld - Ibn Qurra [10] (329), by Rosenfeld and Khayretdinova [1] (50). Revision of a non-extant work of Archimedes containing 20 geometric propositions.

M4. [Revision of] The Book of Archimedes on Tangent Circles (Kitāb Arshimīdis fī'l-dawāir al-mutamāssa) - Patna (2468/28). Edition: Ibn Qurra [3] (No 2).

M5. Book of Assumptions (Kitāb al-mafrūḍāt) - Cairo (Fāḍil riyāḍa 41/4), Istanbul (SM AS 4832/4). Russian translation by al-Dabbagh: Ibn Qurra [10] (33-44). Research by al-Dabbagh and Rosenfeld: Ibn Qurra [10] (329-330), Dold-Samplonius [17], Hadfi [2], Rosenfeld and Khayretdinova [1] (50-52), Steinschneider [1]. Treatise contains 36 geometric propositions.

M6. Exposition of Book of Assumptions (Taḥrīr Kitāb al-mafrūḍāt) - Aligarh (Azad Sulayman 154/14), Berlin 5939, quart. 1867/16), Florence (271/13, 286/14, Med. 273), Hyderabad (riyad. 383, 405, 437; Salar riyad. 21, 32), Istanbul (AM 769/12; Atıf 1712/12; Köprülü 930/13, 931/13; SM 440/13, Carullah 1475/2, 1502/20; TK 3456/14), Leiden (14/24), London (Ind. 743), Mashhad (5449), New Haven (1494), Oxford (I 875/4, 895/10, 960/6), Paris (2467/4), Philadelphia (1474), Rampur (412), St. Petersburg (Nat. 144/16), Tabriz (152), Tehran (Sipahsalar 528; Univ. 851), Vienna (1209/12). All manuscripts are in the later revision of al-Ṭūsī (No 606, M10). Edition: al-Ṭūsī [15] (No 3). Russian translation by al-Dabbagh: Ibn Qurra [10] (45-54). Research: by al-Dabbagh and Rosenfeld: Ibn Qurra [10] (330-331), Dold-Samplonius [9], Rosenfeld and Khayretdinova [1] (50-52]. Treatise contains 34 geometric propositions. It is a revision of M5. Propositions of this treatise differ from M5 by their numbers, order, and contents. This treatise and the work (No 74, M1) of Banū Mūsā, "Data" and "Optics" of Euclid and treatises of Autolycus, Aristarchus of Samos, Archimedes, Theodosius, Menelaus, and Hypsicles were included by Ibn Qurra in "Intermediate Books" (al-Kutub al-mutawassiṭāt), which must be studied between Euclid's "Elements" and Ptolemy's "Almagest".

M7. Book on the Method of Determining Amicable Numbers with Ease (Maqāla fī istikhrāj al-a`dād al-mutaḥābba bi-suhūlat al-maslak ilā dhālika) = Book on Amicable Numbers (Kitāb fī'l-a`dād al-mutaḥābba) - Paris (2457/38) - under the first title, Istanbul (SM AS 4830/7) - under the second title. Partial French translation of the Paris manuscript: Woepcke [4]. Russian translation of the same manuscript by Matviyevskaya: Matviyevskaya [9] (90-111), Ibn Qurra [10] (112-126). Research: Borho [1], Hogendijk [7], Matviyevskaya: [5] (117-120), [9] (87-90, 112-116), Ibn Qurra [10] (337-338), Rosenfeld and Khayretdinova [1] (100-102), Sa`idan [21].

"Amicable numbers" defined by Pythagoreans are two natural numbers each of which is equal to the sum of divisors of the other. The rule of Ibn Qurra for obtaining amicable numbers is a generalization of the rule of Euclid for obtaining perfect (=autoamicable) numbers. The rule of Ibn Qurra is as follows: if $2^{n+1}-1+2^{n}$, $2^{n}-1+2^{n-1}$ and $2^{n+1}(2^{n+1}+2^{n-2})-1$ are prime numbers, then $2^{n}(2^{n+1}-1+2^{n})(2^{n}-1+2^{n-1})$ and $2^{n}[2^{n+1}(2^{n+1}+2^{n-2})-1]$ are amicable. The treatise contains 10 propositions.

M8. Book on Composition of Ratios (Kitāb fī ta`līf al-nisib) = Treatise for Pupils on Composed Ratio (Risāla ilā l-muta`allimīn fī'l-nisba al-mu'allafa) - Paris (2457/15) - under the first title, Istanbul (TK 3464/11, Haz. 455/1) - under the second title.

Description of the first Istanbul manuscript: SHIM (454). Russian translations: by Rosenfeld and Karpova of the Paris manuscript - Ibn Qurra [8], and al-Dabbagh - Ibn Qurra [10] (77-101). Research of the same 3 translators: Ibn Qurra [10] (335-336), Karpova and Rosenfeld [1], Rosenfeld and Khayretdinova [1] (61-64).

A ratio $\frac{A}{B}$ is said be composed of ratios $\frac{C}{D}$ and $\frac{E}{F}$ if the first is product of the second and third ones. Since ancient mathematicians used the arithmetic terminology only for natural numbers, they called multiplication of ratios of geometric quantities "composition". The treatise consists of 3 chapters on properties of composed ratios and problems. The theory of composed ratios led later mathematicians to the notion of real number.

M9. Treatise on the Figure of Secants (Risāla fī al-shakl al-qaṭṭā`) - Algiers (1446), Berlin (5940), Cairo (Fāḍil riyāḍa. 40/16), Damascus (5648), Escorial (I 967/2), Hyderabad (riyad. 327), Istanbul (SM AS 4832/7; TK 3464/13, Haz. 455/3), Paris (2457/37, 2467/13), Tehran (Mu`tamid 120/19). Description of Escorial manuscript: Derenbourg [7] (122). Latin translation by Gherard of Cremona: Björnbo [6]. Partial Russian translation: Khalilov and Mamedbeyli [1] (10-12). Complete Russian translation by al-Dabbagh, Karpova, and Rosenfeld: Ibn Qurra [10] (101-112). Research: by the same 3 translators: Ibn Qurra [10] (337), Rosenfeld and Khaytretdinova [1] (72-75). Proof of Menelaus theorem on spherical complete quadrilateral (this figure was called "figure of secants" (al-shakl al-qaṭṭā`), Arabic mathematicians called the theorem on this figure by the same name. This was the first theorem of spherical trigonometery; Menelaus and Ptolemy formulated this theorem in terms of chords of arcs, Ibn Qurra formulated it in terms of sines of arcs.

M10. Book on Measurement of Conic Section Called Parabola (Kitāb fī misāḥat qaṭ` al-makhrūṭ alladhī yusammā al-mukāfi') - Cairo (Fāḍil riyāḍa. 40/13), Istanbul (SM AS 4832/3), Mashhad (5593), Paris (2457/25). Incomplete German translation: Suter [31]. Complete Russian translation by al-Dabbagh: Ibn Qurra [10] (138-157). Research: by al-Dabbagh and Rosenfeld: Ibn Qurra [10] (341-343), Rosenfeld and Khayretdinova [1] (82-85), Yushkevich [7-8]. Treatise contains 20 propositions for calculating the area of a segment of parabola equivalent to the integration of the function ($y=k\sqrt{x}$).

M11. Book on Measurement of Parabolic Solids (Maqāla fī misāḥat al-mujassamāt al-mukāfiyya) - Paris (2457/24). Incomplete German translation: Suter [32]. Complete Russian translation by al-Dabbagh: Ibn Qurra [10] (157-196). Research: by al-Dabbagh and Rosenfeld: Ibn Qurra [10] (343-348), Rosenfeld and Khayretdinova [1] (85-91). Treatise contains the classification of solids of revolution obtained by the rotation of segments of parabola: 3 kinds of "parabolic cupolas" and 2 kinds of "parabolic spheres" and 36 propositions for calculating the volumes of parabolic cupolas equivalent to the integration of the function y=kx.

M12. Book on Measuring Plane and Solid Figures (Kitāb fī misāḥat al-ashkāl al-musaṭṭaha wa'l-mujassama) - Istanbul (SM AS 4832/6). Russian translation by Sansour: Ibn Qurra [10] (130-138). Research: by Rosenfeld and Sansour: Ibn Qurra [10] (339-341), Rosenfeld and Khayretdinova [1] (79-82). Book in 3 chapters: 1) Areas of Plane Figures, 2) Areas of Surfaces, 3) Volumes of Solids. Only rules for areas and volumes are given, without proofs. In particular there is the general formula for the volumes of cylinder, cone and truncated cone: if areas of the tops and bottoms and the height of these solids are equal to (S1, S2, and h), the volume is equal to ($\frac{1}{3}$(S1 +$\sqrt{}$ S1S2 +S2)/3).

M13. Book on How to Solve Geometric Problems (Kitāb fī'l-ta'attī li-istikhrāj al-a`mal al-handasiyya) = Treatise on the Way One Must Proceed to Obtain Desirable Geometric Truths (Risāla fī kayf yanbaghī an yuslaka li nayl al-maṭlūb fī'l-ma`ānī al-handasiyya) = Treatise on the Cause Why Euclid Disposed Propositions of His Book in Such Order (Risāla fī'l-`illa allatī lahā rattaba Uqlīdis ashkāl kitābihī dhālika al-tartīb) - Cairo (riyad. 898/22 - under the first title, Fāḍil riyāḍa. 40/11 - under the second title), Damascus (5648 - under the second title), Istanbul (SM AS 4832/1 - under the second title), Leiden (14/21 - under the first title), Paris (2457/43 - under the first title), Tunis (Ahmad. 5482/5 - under the third title). Edition of the Paris manuscript: Ibn Sinān [4] (323-326). Russian translation by al-Dabbagh: Ibn Qurra [10] (54-59). Research: by al-Dabbagh and Rosenfeld: Ibn Qurra [10] (331-332), Rosenfeld and Khayretdinova [1] (52-53). In the treatise three kinds of geometric problems are considered: measuring, constructions, and demonstrations (Euclid in "Elements considered only problems of the second and third kinds).

M14. Treatise on the Proof Ascribed to Socrates Concerning the Square and its Diagonal (Risāla fī'l-ḥujja al-mansuba ilā Suqrāṭ fī'l-murabba` wa quṭrihī) - Cairo (Fadil riyad. 40/12), Damascus (5648), Istanbul (SM AS 4830/5). Edition with Turkish translation: Sayılı [16]. Russian translation by Rosenfeld: Ibn Qurra [10] (60-64). Research: al-Daffa [4], by Rosenfeld: Ibn Qurra [10] (332-333), Rosenfeld and Khayretdinova [1] (53-55), Sayılı [17], Scriba [1]. The "proof ascribed to Socrates" is described in Plato's "Meno", it is the proof of the Pythagoras theorem for an isosceles right-angled triangle. In the treatise variations of the general Pythagoras theorem and its generalizations are considered.

M15. Book on the Construction of a Solid Figure with Fourteen Faces Inscribed into the Given Sphere (Kitāb fī `amal shakl mujassam dhī arba`a `ashara qā`ida tuḥīṭu bihī kura ma`lūma) - Cairo (mīqat 1047/3), Istanbul (Köprülü 948/3). Edition: Ibn Qurra [5]. Edition with German translation: Bessel-Hagen and Spies [2]. Russian translations by Veselovskiy: Archimedes [4] (387-390), by al-Dabbagh and Rosenfeld: Ibn Qurra [10]

(54-66). Greek (ancient and modern) translations by Stamatis: Archimedes [5] (III 221-228). Research: by al-Dabbagh and Rosenfeld: Ibn Qurra [10] (333), Rosenfeld and Khayretdinova [1] (55-56). Treatise contains the construction of a semi-regular polyhedron with 14 faces (5 squares and 8 triangles) inscribed in a sphere. It was included by some publishers in works of Archimedes since semiregular polyhedra were discovered by him.

M16. Book Showing that Two Lines Drawn under Angles Less than Two Right Angles to Each Other will Meet (Maqāla fī anna al-khaṭṭayn idhā ukhrijā ilā zāwiyatayn aqall min qā'imatayn iltaqayā) - Istanbul (SM Carullah 1502/3), Paris (2457/32), Tehran (Sipahsalar 597, 690, 1352). English translation: Sabra [5] (19-27). French translation: Jaouiche [4] (151-160). Russian translations by al-Dabbagh and Rosenfeld: Ibn Qurra [4], [10] (71-76), Rosenfeld and Yushkevich [4]. Research: by al-Dabbagh and Rosenfeld: Ibn Qurra [10] (334-335), Jaouiche [4] (49-56), Pont [1] (167-168), Rosenfeld [25] (51-55), [45] (52-56), Rosenfeld and Khayretdinova [1] (56-59), Rosenfeld and Yushkevich [4], [10] (36-41), Sabra [5]. The treatise contains an attempt to prove Euclid's 5th postulate based on an implicite supposition on possibility of a "simple motion", that is, parallel translation by means of which the existence of a rectangle is proved, this supposition implies the assertion of the 5th postulate.

M17. Book Showing that if a Straight Line Falls on Two Straight Lines in Such a Way that the Interior Angles on the Same Side Are Less Than Two Right Angles, Then These Straight Lines Will Meet (Kitāb fī annahu idhā waqa`a khaṭṭ mustaqīm `alā khaṭṭayn mustaqīmayn fa sayyara al-zāwiyatayn allatayn fī jiha wāḥida aqall min qā'imatayn fa 'inna al-khaṭṭayn iltaqayā idhā ukhrijā fī tilka al-jihā) = Book on Proof of the Known Postulate of Euclid (Maqāla fī burhān al-muṣādira al-mashhūra min Uqlīdis) - Cairo (Fāḍiriyāḍa 40/17), Damascus (5648) - under the second title, Istanbul (SM AS 4832/9) - under the first title. English translation: Sabra [5] (28-32). French translation: Jaouiche [4] (145-149). Russian translations: Rosenfeld and Yushkevich [4] (593-597), by al-Dabbagh and Rosenfeld - Ibn Qurra [10] (68-70). Research: al-Dabbagh and Rosenfeld - Ibn Qurra [10] (334), Jaouiche [4] (45-49), Pont [1] (164-166), Rosenfeld [25] (49-51), [45] (49-51), Rosenfeld and Khayretdinova [1] (59-61), Rosenfeld and Yushkevich [1], [10] (31-36), Sabra [5]. Another attempt to prove Euclid's 5th postulate based on an implicit supposition that if two straight lines converge in one direction, they cannot, respectively, converge or diverge in the other direction. This fact implies the existence of a parallelogram, by means of which the 5th postulate is proved.

M18. Book of the Sections of a Cylinder and its Surface (Kitāb fī quṭū` al-usṭuwāna wa basīṭihā) - Cairo (Fāḍil riyāḍa. 41/6 in the revision of Ibn Abī Jarāda, (No 664), Istanbul (SM AS 4832/2). Russian translation by Karpova and Rosenfeld: Ibn Qurra [10] (196-236). Research: Karpova [1], Karpova and Rosenfeld [2], by the same authors: Ibn Qurra [10] (348-350), Rosenfeld and Khayretdinova [1] (91-93, 98-100). Treatise in 4 chapters: 1) on plane sections of a right and oblique circular cylinder, 2) on area of ellipse and its segments, 3) on maximal and minimal sections of a circular cylinder, 4) on area of a part of surface cylinder contained between two plane sections. In chapter 2 it is proved that the area of an ellipse with semiaxes (a) and (b) is equal to the area of a circle with radius ($\sqrt{ab}$). The area of a segment of (ab) ellipse is equal to the area of a segment of a circle obtained from the ellipse by an equisffine transformation. In chapter 4 the area of ellipse and its segments is proved. In chapter 4 it is proved that area of part of surface of a circular cylinder contained between two plane sections is equal to the product of the minimal section of the cylinder by the semisum of lengths of segments of two opposite rectilinear generators of the cylinder. This calculation is equivalent to the calculation of an elliptic integral.

M19. Reasoning on Establishment of Correctness of [Solutions of] Problems of Algebra by Geometric Proofs (Qawl fī taṣḥīḥ masāil al-jabr bi'l-barāhīn al-handasiyya) - Istanbul (SM AS 2457/3), Mashhad (5258/1), Oxford (I 913/37, 987/44), Tehran (181/5, Mu`tamid). Edition of the manuscript and German translation: Luckey [2], Russian translation by Matviyevskaya and Rosenfeld: Ibn Qurra [10] (126-128). Research by Matviyevskaya and Rosenfeld: Ibn Qurra [10] (338), Rosenfeld and Khayretdinova [1] (64-65). The treatise contains a geometric proof of the rules of solution of quadratic equations by propositions II_5 and II_6 of Euclid's "Elements".

M20. Problem of the Construction of Two Means and Division of a Known Angle onto Three Equal Parts (Mas`ala fī `amal al-mutawassiṭayn wa qismat zāwiya ma`lūma bi- thhalāthat aqsām mutasāwiyya) = Division of a Known Rectilinear Angle into Three Equal Parts (Qismat al-zāwiya al-mustaqīmat al-khaṭṭayn bi-thhalāthat aqsām mutasāwiyya) - Mashhad (431/3) - under the first title, Paris (2457/45) - under the second title. Russian translation by al-Dabbagh and Rosenfeld - Ibn Qurra [10] (128-130). Research: by al-Dabbagh and Rosenfeld - Ibn Qurra [10] (338-339), Rosenfeld and Khayretdinova [1] (65-67). The treatise contains the solutions of two classical problems of ancient Greek mathematics: finding two mean proportionals (x) and (y) between two given magnitudes (a) and (b) ($a:x = x:y = y:b$) and trisection of an angle. Both these problems are equivalent to cubic equations and in the treatise they are solved by means of intersection of circle and equilateral hyperbola.

M21. Book of Measuring what is cut off by Lines (Kitāb fī misāḥat qaṭ' al-khuṭūṭ) - is mentioned in TH. Only one fragment is extant - Problem: If a Circle is Drawn on a Side of [Equilateral] Triangle and a Side of [Regular] Hexagon [Inscribed into the Circle] on One Side from the Center, then the Plane Figure Located between them is Equal to One Sixth of the Circle (Mas'ala: idhā kharajā ḍil' al-muthallath wa ḍil' al-musaddas fī jiha wāḥida 'an al-markaz kāna al-saṭḥ alladhī yu'khadhu baynahumā mithl sudus al-dāira) - Tehran (Univ. Adab. 284/5). Edition of facsimile of the manuscript, French translation, and research: Sesiano [14]. Russian translation by Rosenfeld - Ibn Qurra [10] (67-68). Research: by Rosenfeld - Ibn Qurra [10] (334), Rosenfeld and Khayretdinova [1] (56). Problem: If in a circle the sides of inscribed equilateral triangle and regular hexagon are drawn on one side from the center, then the area of the figure bounded by these sides and two arcs of the circumference of the circle is equal to 1/6 of the area of the circle.

M22. Premises on the Science of Arithmetic (Muqaddimāt fī 'ilm al-ḥisāb) - Oxford (I 913/32, 987/38). The treatise contains 20 geometric problems.

TH mentions mathematical works of Ibn Qurra:

M23. Introduction to the Wonderful Book of Euclid (Madkhal ilā kitāb Uqlīdis al-'ajīb).

M24. Book on Geometry for Isma'il ibn Bulbul (Kitāb fī'l-handasa ilā Ismā'il ibn Bulbul). Ismā'il ibn Bulbul was one of the viziers of Caliph al-Mu'tamid.

M25. Improvement of the First Book of the Work of Apollonius "On Division in a Definite Ratio" (Iṣlāḥ al-maqāla al-ūlā min kitāb Abulūniyūs fī qaṭ' al-nisba al-maḥdūda).

M26. Treatise on a Number of a Magic Square (Risāla fī 'adad al-wafq). See Rosenfeld and Khayretdinova [1] (102-103). Also mentioned by Al-Bīrūnī in his "Chords (No 348, M4).

M27. [Commentary on Elements of Geometry by Menelaus]. Al-Bīrūnī [23] (113) informs that here Ibn Qurra tried to simplify Menelaus' construction of a broken line inscribed in a semicircle and equal to a given line. His mathematical treatises also mentioned by Abū'l-Faraj [16] (I 153) in his "Chronography" (No 633, H1) and in the list of Syriac works of Ibn Qurra:

M28. Book Showing that two Lines Drawn under Angles less than Two Right Angles to each other will Meet (Kethābhā de-al hay datrein surṭe trīse kadh mettafkīn 'al bṣīr men tartein gunāwāthā trīṣāthā pag'īn baḥdāde) Sy. The coincidence of this title with the title of M16 shows that this treatise was a Syriac prototype of M16.

M29. [Other book about the same problem] Sy. This treatise apparently was a Syriac prototype of M17.

A1. [Revision of the] Book "Almagest" by Ptolemy (Kitāb al-Majisṭī li- Baṭlamyūs) - Bombay (74). Revision of Ptolemy's "Almagest" in the translation by Ḥunayn ibn Isḥāq al-'Ibādī (No 77).

A2. Book on Deceleration and Acceleration of Motion on Zodiacal Circle Depending From Its Disposition with Respect to Excentric Circle (Kitāb fī ibṭā' al-ḥaraka fī falak al-burūj wa sur'atihā bi-ḥasab al-mawāḍi' allatī yakūnu fīhi min al-falak al-khārij al-markaz) - Paris (2457/13). Edition and French translation by Morelon: Ibn Qurra [11] (68-82). Russian translation by Rosenfeld: Ibn Qurra [10] (267-271). Research: by Morelon: Ibn Qurra [11] (LXXVI-LXXIX), Schirmer [1], Stolyarova [1], by Rosenfeld - Ibn Qurra [10] (361-363), Yushkevich and Rosenfeld [4] (241-243), Rosenfeld and Khayretdinova [1] (93-98). Treatise contains investigation of the non-uniform visible motion of the Sun under the supposition that the Sun moves uniformly on the circle and the motionless Earth, which is the center of Universe, is not at the center of this circle. The points of maximal and minimal velocities of the Sun and the points where its instateneous velocity is equal to the mean one are found.

A3. Book on Description of Figures Which Are Obtained by the End of the Shadow of a Gnomon under Its Motion on the Plane of Horizon in Any Day and in Any City (Maqāla fī ṣifat al-ashkāl allatī taḥduthu bi-mamarr ṭaraf ẓill al-miqyās fī saṭḥ al-'ufq fī kull yawm wa fī kull balad) - Escorial (II 960/4). Description of the manuscript: Derenbourg [7] (96). Edition and French translation by Morelon: Ibn Qurra [11] (117-129). German translation: Wiedemann and Frank [4]. Russian translation by Karpova: Ibn Qurra [10] (248-251). Research: by Karpova and Rosenfeld - Ibn Qurra [10] (355-356), Luckey [1], by Morelon: Ibn Qurra [11] (CXIX-CXXV), Rosenfeld and Khayretdinova [1] (67-70). In the treatise the trajectories of the end of shadow of the gnomon on horizontal sundial are investigated. It is proved that these trajectories are conic sections and straight lines.

A4. Book on Horary Instruments Called Sundials (Kitāb fī ālāt al-sā'āt allatī tusammā rukhāmāt) - Cairo (falak 8532-8533, miqat 1047-1048, Taymur riyad. 356), Istanbul (Köprülü 948/1). Edition with German translation by Garbers: Ibn Qurra [2]. Edition and French translation by Morelon: Ibn Qurra [11] (130-164). Russian translation of a fragment: Ibn Qurra [9], complete Russian translation by Khayretdinova, Karpova, and Rosenfeld: Ibn Qurra [10] (252-266). Research: by Khayretdinova, Karpova, and Rosenfeld - Ibn Qurra [10] (356-361), Luckey [1], by Morelon: Ibn Qurra [11] (CXXVI-CXL), Rosenfeld and Khayretdinova [1] (70-72, 75-79), Sansour [1-2]. Theory of many kinds of sundials. The rules equivalent to theorems of spherical trigonometery are used. The position of the end of shadow of the gnomon on the plane of sundial is

characterized by polar coordinates "length of shadow" (l) and "azimuth of shadow" (A) and by Cartesian coordinates "longitude" (x) and "latitude" (y), the connection between these coordinates is found in the form $x = l \sin A$, $y = l \cos A$.

A5. Book on Calculation of the Visibility of the Crescent (Kitāb fī ḥisāb ru'yat al-ahilla) - London (Sup. 7473). Edition and French translation by Morelon: Ibn Qurra [11] (99-112). Russian translation by Rosenfeld: Ibn Qurra [10] (271-278). Research: Kennedy [14] (research of the London manuscript and its comparison with the exposition of Ibn Qurra's method in (A5a), by Morelon - Ibn Qurra [11] (XCIII-CXVIII), by Rosenfeld - Ibn Qurra [10] (363-365), Rosenfeld and Khayretdinova [1] (119-121). The treatise contains solution of a problem of spherical astronomy based on rules of plane and spherical trigonometry.

A6. Book of Tables on Crescent Visibility (Kitāb fī ru'yat al-ahilla min al-jadwal) - is mentioned in TH. A fragment with the table is included in the zīj (No 476, A1) of al-Khāzinī. A Medieval Latin translation is also extant. Edition and French translation of an extant Arabic fragment by Morelon: Ibn Qurra [11] (113-116). Edition of the Medieval Latin translation: Carmody [4] (31-36). Research: Kennedy [14], by Morelon - Ibn Qurra [11] (XCIII-CXVIII).

A7. Book on Solar Year According to Observations (Kitāb fī sanat al-shams bi'l-raṣad) - London (Ind. 734/1). There are also medieval Latin and Hebrew translations. Edition and French translation by Morelon of the London Arabic manuscript: Ibn Qurra [11] (99-112). Medieval Latin translations: Carmody [4] (41-79). English translation of a Medieval Latin manuscript and its text by Neugebauer: Ibn Qurra [6] (265-289). Russian translation by Rosenfeld: Ibn Qurra [10] (271-278). Research: Kurtik and Rosenfeld: Ibn Qurra [10] (367-372), Moesgaard [1], by Morelon - Ibn Qurra [11] (XLI-XLVI - research of the Arabic, Latin, and Hebrew manuscripts) by Neugebauer in his commentary in Ibn Qurra [6], Rosenfeld and Khayretdinova [1] (114-118). Revision of the treatise (No 74, A10) of Banū Mūsā. Treatise contains the analysis of Babylonian, ancient Greek, Hellenistic, and medieval Baghdad observations of the motion of the Sun and by means of this analysis, the length of the siderial year is found.

A8. Motion of the Eighth Sphere (De motu octave sphere). Only medieval Latin translations are extant. Editions of Latin manuscripts: Millas Vallicrosa [5], [10] (495-506), [17] (200-210), Carmody [4] (84-113). English translation by Neugebauer: from a Latin manuscriptand its text: Ibn Qurra [6] (291-299). Russian translation by Rosenfeld: Ibn Qurra [10] (303-308). Research: Delambre [2] (73-75, 264-265), Goldstein [4], Hartner [18], Kurtik [1, 5], by Kurtik and Rosenfeld: Ibn Qurra [10] (373-376), Mercier [1], Millas Vallicrosa [5], by Neugebauer in his commentary in Ibn Qurra [6], Rosenfeld and Khayretdinova [1] (121-124). Exposition of the hypothesis of "trepidation" of the "eighth sphere" on which, according to the opinion of ancient and medieval astronomers, fixed stars and ecliptic are located. By the hypothesis of trepidation, the eighth sphere does not rotate around the axis of the Universe, but the points of intersection of ecliptic with celestial equator describe small circles.

A9. Letter to al-Qāsim ibn `Ubaydallah (Risāla ilā al-Qāsim ibn `Ubaydallāh). The beginning of this letter is included in the zīj (No 283, A1) of Ibn Yūnis. Edition of the beginning of the letter with French translation: Ibn Yūnis [1] (113-115). Russian translation and research by Rosenfeld: Ibn Qurra [10] (321-322, 380). In the letter "Verified al-Ma'munic Zij" (No 31, A1) of Ibn Abī Manṣūr and the principles of composing planetary ephemerides are discussed. Al-Qāsim ibn `Ubaydallah was Caliph al-Mu`taḍid's vizier.

A10. Letter to Isḥaq ibn Ḥunayn (Kitāb ila Isḥāq ibn Ḥunayn). A fragment of this letter is included in the zīj (No 283, A1) of Ibn Yūnis. Edition of the extant fragment of the letter with French translation: Ibn Yūnis [1] (117-121). Russian translation by Rosenfeld: Ibn Qurra [10] (322). Research: Dreyer [1] (276), Goldstein [3], by Kurtik and Rosenfeld: Ibn Qurra [10] (380), Rosenfeld and Khayretdinova [1] (124-125). In the extant fragment the "Verified al-Ma'munic Zīj" (No 31, A1), its difference from "Almagest" and various explanations of precession are discussed. It is addressed to al-`Ibādī (No 114).

A11. Reasoning on the Explanation Mentioned by Ptolemy by Which His Precursors Determined Equal Circular Motions of the Moon (Qawl fī īḍā ḥ al-wajh alladhī dhakara Baṭlamyūs anna bihī istakhraja man taqaddamahū masīrāt al-qamar al-dawriyya wa hiya al-mustawiyya) = Treatise on the Motion of the Sun and the Moon (Risāla fī ḥarakat al-nayyirayn) - Cairo (mīqāt 1047/2), Istanbul (Köprülü 948/2) - under the first title; Istanbul (TK Haz. 455), Oxford (I 987/19) - under the second title. Edition and French translation by Morelon: Ibn Qurra [11] (83-92). German translation: Bessel-Hagen and Spies [1] (187-189). Russian translation by Rosenfeld: Ibn Qurra [10] (298-303). Research: GAS (VI 167); by Morelon - Ibn Qurra [11] (LXXX-XCII), by Rosenfeld - Ibn Qurra [10] (372), Rosenfeld and Khayretdinova [1] (118-119). Treatise contains the classification of non-uniform motions of the Sun and the Moon.

A12. Collected from the Sayings of Ptolemy on Division of the Inhabited Part of the Earth According to Zodiacal Signs and Planets (Jawāmi` limā qāla Baṭlamyūs fī qismat al-arḍ al-maskūna `alā'l-burūj wa'l-kawākib) - Istanbul (SM AS 4832/12). Research: Rosenfeld and Khayretdinova [1] (145-147).

A13. Treatise on Celestial Spheres, their Rings, the Number of their Motions, and Sizes of their Advancement (Risāla fī dhikr al-aflāk wa ḥalaqihā wa `adad ḥarakātihā wa miqdār masīrihā) = What Thābit ibn Qurra al-Ḥarrānī Collected on the Structure of Celestial Spheres, their Rings, their Number and Numbers of All their Motions, their Planets, Sizes of their Advancement, and the Direction of their Motions (Mā jama`a Thābit ibn Qurra al-Ḥarrānī fī tarkīb al-aflāk wa ḥalaqihā wa `adadihā wa `adad kull ḥaraka wa'l-kawākib fīhā wa mablagh masīrihā wa'l-jihāt allatī tataḥarraku ilayhā) - Cairo (Tal`at maj. 377), Istanbul (SM AS 4832/8) - under the first title, St. Petersburg (Nat. Firk. 130/1) - under the second title. Edition and French translation by Morelon: Ibn Qurra [11] (18-25). Russian translation by Sansour: Ibn Qurra [10] (309-311). Research: by Morelon - Ibn Qurra [11] (XLI-XLV), by Rosenfeld and Sansour - Ibn Qurra [10] (375-376), Rosenfeld and Khayretdinova [1] (111-114). Concise exposition of the Ptolemaic system of the Universe.

A14. Section on the Method of Ptolemy for Proof that the Center of Deferent of each Upper Planet is in the Middle between Centers of Ecliptic and Equant (Faṣl fī'l-ṭarīq alladhī bihī `allama Baṭlamyūs anna al-ḥāmil fī kull wāḥid min al-kawākib al-`ulwiyya `alā muntaṣaf mā bayna markazay al-burūj wa mu`addil al-masīr) - Oxford (I 913/15).

A15. Book on Calculation of Solar and Lunar Eclipses (Maqāla fī ḥisāb kusūf al-shams wa'lqamar) - is mentioned in TH. Only an extant fragment is included in the zīj (No 476, A1) of al-Khazini. Latin translation of the extant fragment by Nallino: al-Battānī [2] (I 280). Research: Morelon [1a], Rosenfeld and Khayretdinova [1] (121).

A16. Books on Simplification of "Almagest" (Kutub fī tashīl al-Majisṭī) - are mentioned in TH. Only two fragments are extant under the titles: Simplification of "Almagest" (Tashīl al-Majisṭī) - Istanbul (SM AS 4832/10) and Books on Simplification of "Almagest". From Sayings of Thābit ibn Qurra on Astronomy (Kutub fī tashīl al-Majisṭī. Min kalām Thābit ibn Qurra fī'l-hay'a) - Istanbul (SM AS 4832/11). More complete medieval Latin translation is extant under the title, Book of Thābit ibn Qurra on what is Necessary to Explain before Reading "Almagest" (Liber Thebit filii Chore de hiis que indigent expositione antequam legatur Almagesti) - St. Petersburg (Acad. F8), there are also other medieval Latin and Hebrew manuscripts. Edition and French translation of an Istanbul manuscript by Morelon: Ibn Qurra [11] (1-17). Edition of more complete medieval Latin translation according to other manuscripts: Carmody [4] (131-138). Russian translation by al-Dabbagh and Rosenfeld: Ibn Qurra [10] (314-319). Research: by al-Dabbagh and Rosenfeld - Ibn Qurra [10] (377-379), by Morelon - Ibn Qurra [11] (XXXVII-XLI, XLIII-XLV), Rosenfeld and Khayretdinova [1] (108-111).

A17. Book on Sphere (Kitāb fī'l-kura) - is mentioned in TH. Only the medieval Latin translation is extant under the title: Book on Right Conception of the Sphere and Its Circles (Liber de recta imaginatione spere et circulorum eius). Edition: Carmody [4] (140-143). Russian translation by Rosenfeld: Ibn Qurra [10] (309-314). Research by Rosenfeld - Ibn Qurra [10] (376-377),

A18. Book on Magnitudes of Stars and Planets and [Their] Ratios to the Earth (Liber de quantitatibus et planetarum et proportio terre). Only the medieval Latin translation is extant. Edition: Carmody [4] (145-148). Russian translation by Rosenfeld: Ibn Qurra [10] (319-321). Research: Benjamin [1] (who ascribed this treatise to al-Farghānī (No 67), however, this is not possible since al-Farghānī is mentioned in this treatise), by Rosenfeld - Ibn Qurra [10] (379-380), Rosenfeld and Khayretdinova [1] (112-113).

TH mentions Ibn Qurra's astronomical treatises:

A19. Book on Anwā' (Kitāb al-anwā') - is quoted according to the revision of this treatise by Ibn Qurra's son Sinān (No 169), by al-Bīrūnī in "Chronology" (No 348, E1), see Rosenfeld and Khayretdinova [1] (125).

A20. Book on Causes of Solar and Lunar Eclipses (Kitāb fī `ilal kusūf al-shams wa'l-qamar).

A21. Book on What Was Neglected by Theon in the Calculation of Solar and Lunar Eclipses (Kitāb fīmā aghfala Thāūn fī ḥisāb kusūf al-shams wa'l-qamar).

A22. Book on Operations with a Globe (Kitāb fī'l-`amal bi'l-kura).

A23. Book on Use of the "Verified [Zij]" (Kitāb fī isti`māl al-Mumtaḥan).

A24. Book on Horary Instrument (Kitāb fī ālat al-zamān).

A25. Book on Traces which Appear on the Moon during Eclipses and their Meaning (Kitāb fīmā yaẓharu fī'l-qamar min āthār wa `alāmātihī).

UA mentions Ibn Qurra's astronomical works:

A26. Answers on some Questions Proposed to him by Sanad ibn `Alī (Jawābāt lahū `an `iddat masāil sa'ala `anhā Sanad ibn `Alī) - answers on questions of al-Ḥasan ibn Sahl ibn Nawbakht (No 51).

A27. Book on the Science of Calendar by the "Verified [Zij]" (Kitāb fī `ilm mā fī'l-taqwīm bi'l-Mumtaḥan).

A28. Book on Craft of Stars (Kitāb fī miḥnat al-nujūm).

A29. Concise [Book] on the Science of Stars (Mukhtaṣar fi ʿilm al-nujūm).

In "Chronography" (No 633, H2) of Abū'l-Faraj [16] (I 153), Ibn Qurra's astronomical work in Syriac is mentioned:

A30. Book on Division of the Days of the Week According to Seven Planets (Kethāba de-pulāg yawmātha de-shābūʿa ʿal kawkb shabʿā) Sy - is quoted also by Chwolsohn [1] (II 3) according to Arabic translation (No 169, A5) by Ibn Qurra's son Sinān. The correlation between the days of the week and the planets (Sunday - the Sun, Monday - the Moon, Tuesday - Mars, Wednesday - Mercury, Thursday - Jupiter, Friday - Venus, Saturday - Saturn) is discussed. Regarding this correlation that was accepted by many nations of Asia and Europe see Rosenfeld [51].

My1. Book on Ingenious Manners (Kitāb al-ḥiyal) - is mentioned in TH. Only Medieval Latin translations are extant under the titles "De praestigiorum" and "On images" (De imaginibus). Editions of some Latin translations: Carmody [4] (180-194). Research: Rosenfeld and Khayretdinova [1] (126-127, 134-135). Handbook for manufacturing metallic, wax, and clay images of people, animals, cities or countries for magic operations connected with astrology.

Ph1. Book on Interesting Questions (Kitāb fi l-masāil al-mushawwiqa) - Tehran (Malik 6188). Description of the manuscript: GAS (V 80). Russian translation by al-Dabbagh: Ibn Qurra [10] (243-247). Research: by al-Dabbagh and Rosenfeld - Ibn Qurra [10] (353-357), Rosenfeld and Khayretdinova [1] (135-138, 155-156). The treatise contains 9 questions, physical, geometric, and medical, partially from "Physical Problems" and "Meteorologics" of Aristotle. The phenomenon of camera obscura is explained wrongly - this question was critized in "Shadows" (No 348, A4) by al-Bīrūnī [46] (I 47-48).

Me1. Book on Properties of a Load and its Equilibrium (Kitāb fī ṣifat al-wazn wa ikhtilāfihi) - is mentioned in TH and included under another title as a chapter in the book (No 476, Me1) of al-Khāzinī. Edition: al-Khāzinī [1] (33-38). Russian translation by Levinova and Rozhanskaya: al-Khāzinī [2] (38-41). Research: by translators - al-Khāzinī [2] (285-286), Rosenfeld and Khayretdinova [1] (128-130), Rozhanskaya [8] (96-97).

Me2. Book on Lever Balance (Kitāb fi'l-qarasṭūn) - Beirut (Greek 364/11), Berlin (6023), London (Ind. 767/7), Paris (4946/6). Edition with French translation: Jaouiche [2] (145-169). Latin translation by Gherard of Cremona: Buchner [1], the same text with English translation by Clagett: Moody and Clagett [1] (77-117). German translation of Arabic text: Wiedemann [127]. Russian translation by Rosenfeld, Rozhanskaya, and Stolyarova: Ibn Qurra [10] (237-242). Research: Duhem [1] (I 79-92), Gukovskiy [1] (96-107), Jaouiche [2], by Rosenfeld, Rozhanskaya, and Stolyarova: Ibn Qurra [10] (350-353), Rosenfeld and Khayretdinova [1] (130-134), Rozhanskaya [8] (86-96), Stolyarova [1-3], Wiedemann [127]. Theory of level balance with some number of loads, with infinitely many loads, with a uniformly distributed load.

Me3. Book on the Position of Loads Suspended Separately to a Team is the same as one Load Uniformly Distributed on the Team (Kitāb fī anna sabīl al-athqāl allatī tuʿallaqu ʿalā ʿamūd wāḥid mufaṣṣalan hiya sabīluhā idhā juʿilat thiqlan wāḥidan mabthūthan fī jamīʿ al-ʿamūd ʿalā tasāwī) - is mentioned in TH (117). As seen from the title of this treatise, it is probably included in abridged form in Me2.

Mu1. Problem on Music (Masʿala fi'l-mūsīqa) - Manisa (1705/9). Facsimile edition of the manuscript, French translation, and research: Shiloah [1]. Research: Rosenfeld and Khayretdinova [1] (138). Answer on the question of Abū'l-Ḥasan ibn Yaḥyā on comparison of sound of the same altitude made by lute and by human voice. Altitudes of sounds are characterized by the names of strings of a lute and by the placement of fingers.

Mu2. Book on Music (Kethābhā de-musiqi) Sy - is mentioned by Abū'l-Faraj [16] (I 153).

G1. Book of Geography (Kitāb ṣurat al-arḍ). Geographical tables are quoted by al-Battānī in the zīj (No 137, A1). Edition and Latin translation by Nallino: al-Battānī [2] (III 234-242, 234-242). The authorship of Ibn Qurra was established by Nallino: al-Battānī [2] (II 211). Partial edition and Russian translation: Kalinina [3] (140-151). Research: Rosenfeld and Khayretdinova [1] (140-145).

G2. [Revision of] the Book of Hippocrates on Athmosphere, Waters, and Countries (Kitāb Buqrāṭ fi'l-aḥwiya wa'l-miyāh wa'l-buldān) - is mentioned in TH.

G3. Book on the Distinction of Longitude (Kitāb fī ikhtilāf al-ṭūl) - is mentioned in UA.

G4. Book on Latitudes (Kitāb al-urūḍ) - is mentioned in UA.

Mi1. Reasoning on the Cause why Seawater Became Salty (Qawl fi'l-sabab alladhī juʿilat lahū miyāh al-baḥr māliḥa) - Istanbul (TK 3342/11). Russian translation by al-Dabbagh: Ibn Qurra [10] (323-328). Research: al-Dabbagh and Rosenfeld: Ibn Qurra [10] (380-381), Rosenfeld and Khayretdinova [1] (147-148, 156). A rational answer to the question: why God created the seawater salty.

Mi2. Book on the Cause why the Mountains were Created (Kitāb sabab khalq al-jibāl) - is mentoned in "Chronology" (No 348, E1) by al-Bīrūnī [2] (252). Apparently, analogous rational answer to the question: why God created mountains.

PH1. Questions Proposed to Thābit ibn Qurra al-Ḥarrānī (Masā'il su'ila `anhā Thābit ibn Qurra al-Ḥarrānī) - London (Sup. 7473). Russian translation by Sansour: Ibn Qurra [10] (289-294). Research: Bebbouchi and Taleb [1], Pines [18], Sansour [1-2], Sansour and Rosenfeld - Ibn Qurra [10] (365-367), Rosenfeld and Khayretdinova [1] (159-162). Answers on the questions of Ibn Qurra's pupil Abū Mūsā ibn Usayd al-`Irāqī, a Christian from Iraq. The abstract character of the notion of number (`adad) is emphatized contrary to concrete object of reckoning (ma`dūd). The existence of actual infinite seats of things is substantiated. The notion of "complete number", that is, infinite cardinal number, is introduced.

PH2. Book on a Concise Exposition of the Sayings of Aristotle in "Metaphysics" (Maqāla fī talkhīṣ mā 'atā bihī Arisṭuṭālis fī mā ba`d al-ṭabī`a) - Hyderebad (Univ. 1402), Istanbul (SM AS 4832/14). Research: Rosenfeld and Khayretdinova [1] (162-163). The problem of the "First motor" is discussed. Critique of the opinion of Aristotle on immobility of quiddity.

ME1. Book of Treasure on the Science of Medicine (Kitāb al-dhakhīra fī `ilm al-ṭibb). Edition by Subhi: Ibn Qurra [1]. Research: Rosenfeld and Khayretdinova [1] (151-153).

ME2. Abridgement by Thābit ibn Qurra of the Book of Galenus on Seven-Months' Babies (Mukhtaṣar Thābit ibn Qurra li-kitāb Jālīnūs fī'l-mawlūdīn li-sab`a ashhur). Edition: Weisser [2] (145-159). Research: Rosenfeld and Khayretdinova [1] (153-155), Weisser [1], [2] (140-144).

Z1. Exposition of the "Book on Animals" of Aristotle, after which his seven Books on Soul follow in Extraction by Thābit ibn Qurra for the Astronomer Mūsā (Jawāmi` kitāb al-ḥayawān li-Arisṭā ṭālīs wa ba`duhū sab` maqālāt fī'l-nafs lahū ayḍan istakhrajahā Thābit ibn Qurra li-Mūsā al-munajjim). On the manuscript: Danish-Pazhuh [6] (694). Research: Kruk [1], Rosenfeld and Khayretdinova [1] (157).

H1. Book of Confirmation of the Faith of Heathens (Kethābhā meṭul shurār tawdīthā de-ḥanfe) Sy - is mentioned by Abū'l-Faraj [16] (I 153) in his "Chronography" (No 633, H1). In this work a fragment is quoted - Syriac with Latin translation: Abū'l-Faraj [3] (I 176-177, II 180-181), English translation: Abū'l-Faraj [16] (158), abridged translations: German - Chwolsohn [1] (I 178-179), English translation: "We are the heirs and offspring of paganism which spread gloriously over the world. Happy is he who for the sake of paganism bears his burden without growing weary. Who has civilized the world and built its cities, but the chieftains and kings of paganism? Who made the ports and dug the canals? The glorious pagans founded all these things. It is they who discovered the art of healing souls, and they too made known the art of curing the body and filled the world with civil institutions and with wisdom which is the greatest of goods. Without them the world be empty and plunged in poverty" (Dowson [1], 141 and Grünebaum [2], 53).

H2. Book of Chronology of Ancient Syrian Kings who were Chaldeans (Kethābhā de-maktabh zabhne de-henūn Kaldeye) Sy - is mentioned by Abū'l-Faraj [16] (I 153) in his "Chronography" (No 633, H1). Fragments of this treatise, perhaps in the Arabic translation by Ibn Qurra's son Sinān (No 169), are extant in KF and in "Chronology" (No 348, E1) by al-Bīrūnī [2] (99-101).

H3. Book on the Glory of his Kin and his Ancestors who came (Kethābhā de-`al tbibūth genseh we-abhāhāoi de-men manū methyabhlīn) Sy - is mentioned by Abū'l-Faraj [16] (I 153) in his "Chronography" (No 633, H1).

H4. Book on Laws and Canons of Heathens (Kethābhā meṭul nāmūse we qānūne de'ḥanfe) Sy - is mentioned by Abu'l-Faraj [16] (I 153) in his "Chronography" (No 633, H1). Fragments of the treatise, perhaps the Arabic translation by Ibn Qurra's son Sinān, are extant in the "Perfect Zij" of al-Hāshimī (No 287, A1), and are quoted in "Chronology" (No 348, E1) by al-Bīrūnī [2] (315-320).

104. ABU'L - ABBAS AL-IRANSHAHRI

Abū'l-`Abbās al-Īrānshahrī (9th c.) from Nishapur, philosopher, astronomer and naturalist. Al-Bīrūnī (No 348, E2) mentions him in "India". "He himself did not believe in any of the then existing religions but was the sole believer in a religion invented by himself, which he tried to propagate", al-Bīrūnī [4] (6). In "Mas`ūdic Canon" (No 348, A1) al-Bīrūnī [14] (870) informs that in 873 al-Īrānshahrī observed a ring-shaped eclipse of the Sun in Nishapur and also mentions his geological observations, "Geodesy" (No 348, G3) al-Bīrūnī [31] (17, 22).

See: GAS (VI 172-173), MAMS (II 103-104, III 362); al-Bīrūnī [3] (6, 249, 326), [12] (II 15), [15] (234), [30] (94, 97), [44] (939, 170), Bulgakov [15], Marupov and Rosenfeld [1] Pines [1] (34-35, 56-60).

Ph1. Physical Problems (al-Masāil al-ṭabī`iyya) - are mentioned in "Shadows" (No 348, A4) by al-Bīrūnī [46] (I 53-54).

Ph2. Book on Ether (Kitāb al-athīr) - is mentioned in the work (No 393, Ph1) of Naṣīr-i Khusraw [7] (98).

Ph3. Book on Demonstration (Kitāb al-dalīl) = Greatest Book (al-Kitāb al-jalīl) - is mentioned in the same work (No 393, Ph1) by Naṣīr-i Khusraw [7] (98, 343). Here the following words of al-Iranshahri are quoted: "Time

is the demonstration of God's knowledge, as well as space is the demonstration of God's power, motion is the demonstration of God's activity, and matter is the demonstration of God's force. All these four things are infinite and eternal" (Naṣir-i Khusraw [7] (100) and Pines [1], (56). Other extractions of this work on matter: Nasir-i Khusraw [7] (96-97).

105. AHMAD AL-YA`QUBI

Aḥmad ibn Abī Ya`qūb ibn Ja`far ibn Wahb ibn Wāḍiḥ al-Kātib al-`Abbāsī al-Ya`qūbī (d. ca 900), historian and geographer, worked in Armenia and Khurasan.

See: AGL (150-154), GAL (I 258-260), GAL² (I 405), GAS (X), IHS (I 607), MAMS (II 104); Brockelmann [16] (EI).

H1. History (Ta'rīkh). Editions: al-Ya`qūbī [1, 5]. Russian translation of the chapter on history of Azerbaijan by Juza: al-Ya`qūbī [3]. Research: Klamroth [1]. Historical work containing information on scholars.

G1. Book on Countries (Kitāb al-buldān). Edition by de Goeje: al-Y`aqūbī [2]. French translation by Wiet: Ya`qūbī [4]. Research: AGL (151-154).

106. MUHAMMAD AL-SABAI

Muḥammad ibn Arqam al-Sabāī (9th c.) from Cordoba; philologist and arithmetician; teacher of Amīr Muḥammad ibn `Abd al-Raḥmān (852-886).

See: MAA (38), MAMS(II 104-105); Ibn al-Abbār [2] (I 96).

107. `ABDALLAH AL-NASRANI

`Abdallāh ibn Masrūr al-Naṣrānī (9th c.), Christian (al-naṣrānī), pupil of Abū Ma`shar (No 88), author of astrological works.

See: GAS (VI 205-206), KF (277), KF² (33), MAA (38), MAMS (II 105), SSM (38), TH (220).

A1. Book of Reasons of Zījes (Kitāb `ilal al-zījāt) - Cairo (Taymur riyad. 99).

Research: GAS (VI 205-206).

A2. Book on Projecting Rays (Kitāb maṭraḥ al-shu`ā `āt) - is mentioned in KF.

108. `UMAR AL-MARWARRUDHI

`Umar ibn Muḥammad ibn Khālid ibn `Abd al-Malik al-Marwarrūdhī (9th c.), son of Muḥammad ibn Khālid ibn `Abd al-Malik al-Marwarrūdhī (No 81) and grandson of Khālid al-Marwarrūdhī (No 42); astronomer.

See: GAS (V 273, VI 159), KF (276), KF² (31), MAA (38), MAMS (II 105), TH (242).

KF mentions his works:

A1. Abridged Zīj (al-Zīj al-mukhtaṣar) - abridgement of the zijes of his grandfather (No 42, A1) and Sanad ibn `Alī (No 48, A1).

A2. Book on Equations of Planets (Kitāb ta`dīl al-kawākib). Equation of a planet is the difference between the visible non-uniform motion of a planet and its uniform mean motion.

A3. Book on Construction of the Plane Astrolabe (Kitāb ṣan`at al-asṭurlāb al-musaṭṭaḥ).

109. `ALI IBN DAWUD

`Alī ibn Dāwūd (9th c.), Jewish astronomer, worked in Baghdad.

See: GAS (VII 330), KF (278), MAA (38), MAMS (II 105).

Mt1. Book on Rains (Kitāb al-amṭār) - is mentioned in KF.

110. IBN SIMAWAIH

Ibn Sīmawaih (Ibn Saymūya) al-Yahūdī (9th c.), Jewish astronomer and astrologer.

See: GAS (VI 172, VII (326), KF (278), KF² (38), MAA (38), MAMS (II 106), TH (437).

A1. Introduction to the Science of Stars (al-Madkhal ilā `ilm al-nujūm) - is mentioned in KF.

Mt1. Book on Rains (Kitāb al-amṭār) - is mentioned in KF.

111. ABU'L-HAMID AL-QADI

Abū'l-Ḥamīd ibn `Abd al-`Azīz al-Qāḍī (d. 905), judge (al-qāḍī) in Kufa, Syria, and Karkh near Baghdad; arithmetician, algebraist, geometer, also knowledgeable in inheritance.

See: KZ (I 220, II 547, V 299), MAA (38-39), MAMS (II 106); Ibn Quṭlubughā [1] (24).

M1. Core of Inheritance (Lubāb al-farāiḍ) - is mentioned in KZ (V 299).

112. AHMAD IBN RUSTA

Abū `Alī Aḥmad ibn `Umar ibn Rusta (9-10th c.), scholar-encyclopaedist.

See: AGL (159-160), GAL (I 260), GAL² (I 406), GAS (VI 160), IHS (I 635), MAMS (II 106); Arendonk [3] (EI), [7] (IA), Maqbul Ahmad [5a] (EI²).

E1. Book of Precious Jewels (Kitāb al-a`lāq al-nafīsa). Only volume VII of this encyclopaedia containing astronomical and geographical chapters is extant. Edition by de Goeje of the extant volume: Ibn Rusta [2], other edition: Ibn Rusta [4], French translation by Wiet: Ibn Rusta [4]. Survey of astronomical chapters: GAS (VI 160). Edition of chapter on geography about Khazars, Bulgars, Magyars, Mordva (al-Burtās), Slavs, and Russians (al-Rūs) with Russian translation by Chwolsohn: Ibn Rusta [1].

113. MUSLIM AL-LAYTHI

Abū `Ubayda Muslim ibn Aḥmad al-Laythī (d. ca 910), known as "Ṣāḥib al-Qibla" (master of Qibla), from Cordoba, jurist, arithmetician and astronomer. He traveled to the East in 873 and where he was taught by scholars.

See: GAS (VI 171), MAA (39), MAMS (II 105-107); al-Andalusī [1] (64-65), Ibn al-Faraḍī [1] (I 413, II 125-126), Tuqan [1] (263).

114. ISHAQ IBN HUNAYN AL-`IBADI

Abū Ya`qūb Isḥāq ibn Ḥunayn ibn Isḥāq al-`Ibādī (830-910), son of Ḥunayn ibn Isḥāq al-`Ibādī (No 77), worked in Baghdad; physician and translator from Greek into Arabic. He translated Euclid's "Elements" (see No 103, M1), Ptolemy's "Quadripartitum", philosophy books of Aristotle and many other works.

See: GAL (I 227), GAL² (I 369), GAS (III 267-268, IV 344, V 272-273, VI 171), HD (266), HD² (173), HMA (I 152-154), IHS (I 600-601), KF (285, 298), KF² (16, 20), KWA (I 66), KWA² (I 187), KZ (486, II 5, III 96-98, V 51, 69, 94, 140, 154, 162, 164, 386, VI 49, 98), MAA (39-40), MAMS (II 107), SSM (38), UA (I 200-201); al-Bayhaqī [5] (30-31), De Young [4], [10] (ENWC), Meyerhof [2], Schehabi [2] (DSB), Strohmaier [4] (EI²), Suter [42a] (EI), Tuqan [1] (212).

M1. Abridgement of the Book of Euclid (Mukhtaṣar kitāb Uqlīdis) - is mentioned in UA.

M2. [Revision of] Euclid's Book "Data" on Geometry (Kitāb al-mu`ṭayāt fī'l-handasa li Uqlīdis) - is mentioned in KZ (V 154).

A1. Improvement of "Almagest" (Iṣlāḥ al-Majisṭī) - is mentioned in KZ (V 386).

HS1. History of Physicians (Ta'rīkh al-aṭibbā'). Edition with English translation by Rosenthal: Isḥāq `Ibādī [1].

115. AL-FADL AL-KHUTTALI

Abū Barza al-Faḍl ibn Muḥammad ibn Wāsi` al-Khuttalī (d. 910), nephew of ` ibn Turk al-Khuttalī (No 59); reckoner.

See: GAS (V 275), KF (281), KF² (37), MAA (40), MAMS (II 107), TH (254); Tuqan [1] (206-207).

M1. Book on Deals (Kitāb al-mu`āmalāt) - is mentioned in KF.

M2. Book on Measurements (Kitāb al-misāḥa) - is mentioned in KF.

116. HAMID AL-WASITI

Abū'l-Rabī` Ḥāmid ibn `Alī al-Wāsiṭī (9th c.), from Wasit, Iraq; famous maker of astronomical instruments. Ibn Yūnis (No 283) compared the fame of al-Wāsiṭī and `Alī ibn `Isā (No 47) in the art of constructing astrolabes to that of Ptolemy in astronomy and Galenus in medicine (Ibn Yūnis [1], 54).

See: GAL² (I 398), GAS (VI 207), IHS (I 601), KF (285), KF² (42), MAA (40), MAMS (II 107-108).

A1. Treatise on Operations with the Spherical Astrolabe (Risāla fi'l-`amal bi'l-asṭurlāb al-kurī) - Istanbul (TK 3509/2). Description of the manuscript: SHIM (458).

A2. Zīj (al-Zīj) - is mentioned in the zīj (No 608, A5) of al-Fārisī, see GAS (VI 207).

117. YUSUF AL-QASS

Yūsuf al-Khūrī al-Qass al-Sāhir (9-10th c.), Christian priest (al-qass), physician and mathematician, translator from Syriac into Arabic; translated Archimedes' Treatise on Triangles, which was later revised by Sinān ibn Thābit (No 169, M3), and the medical works of Galenus.

See: GAS (III 268-269, V 135), IHS (I 600), KF (298), MAA (52, 224), MAMS (II 108), TH (392), UA (I 203); Meyerhof [2].

118. QUSTA IBN LUQA AL-BA`ALBAKI

Qusṭā ibn Lūqā al-Ba`albakī (d. ca 910), from Ba`albak, Syria, Christian, mathematician, astronomer, physician, and philosopher; worked in Baghdad and Armenia in the service of Patriarch Abū'l-Ghiṭrīf; translated works of Aristotle, Autolycus, Hypsicles, Theodosius, Hero, and Diophantus from Greek to Arabic. His translation of Hero's "Mechanics" is published together with the French translation by Carra de Vaux and with the German translation by Nix (Hero [1-2]). His translation of the four books of Diophantus "Arithmetic", which are not extant in Greek, was published with the French translation by Rashed, Diophantus [1-2]; (see also: Bashmakova, Slavutin, and Rosenfeld [1] and Rashed [11]) and English translation by Sesiano [1, 8].

See: GAL (I 222-224), GAL²(I 365-366), GAS (III 270-274, 298-300, 378, IV 288-289, 344-345, V 285-286, VI 180-182), HD (274), HD² (179), HMA (I 157-159), IHS (I 602), KF (295), KF² (43), KZ (I 389, III 95, 98, 399, 616, V 132, 151-152), MA (43-46), MAA (40-42), MAA² (163), MAMS (II 108-110), SSM (38), STMI (73, 346-347), TH (262-263), UA (I 244); Farmer [4] (25), G. Gabrieli [2], Harvey [1] (DSB), [3] (ENWC), Kapp [1] (III 38-41), Safa [1] (71-73, 345-347), Tuqan [1] (209), Wiedemann [198] (EI), [205] (IA).

M1. Book Demonstrating the Calculus Operation of Two Errors (Kitāb al-burhān `alā `amal ḥisāb al-khaṭa'ayn) - Cairo (riyāḍa 702/3), London (Ind. 1043/12), Mashhad (5258/4), Oxford (I 913/34, 987/40). German translation: Suter [18] (112-116). Treatise on the solution of linear equations by the rule of double false position.

M2. Introduction to Geometry (Madkhal ilā'l-handasa) - Rabat (al-Malik 5829). Treatise in the form of questions and answers.

KF mentions his following mathematical works:

M3. Commentary on Three and Half Books from the Work of Diophantus on Numerical Problems (Tafsīrāt li-thalāth maqālāt wa niṣf min kitāb Diyūfanṭus fi'l-masāil al-`adadiyya); for Arabic translations of Diophantus see Steinschneider [2].

M4. On a Proposition on the Sphere and Cylinder (Fī shakl fi'l-kura wa'l-usṭuwāna).

M5. Book on Calculation of Meetings by Means of Algebra and Almucabala (Kitāb fi ḥisāb al-talāqī `alā jihat al-jabr wa'l-muqābala).

M6. Book on Doubts about the Book of Euclid (Kitāb shukūk <`alā> kitāb Uqlīdis).

M7. Treatise on the Extraction of Numerical Problems from the Third Book of Euclid (Risāla fi istikhrāj al-masāil `adadiyya min al-maqāla al-thālitha min Uqlīdis).

A1. Treatise on the Celestial Globe (Risāla fi'l-kura al-falakiyya) = Book on Operations with the Celestial Globe (Kitāb fi'l-`amal bi'l-kura al-falakiyya) = Treatise on Operations with the Stellar Globe (Risāla fi'l-`amal bi'l-kura al-nujūmiyya) = Treatise on Operation with Cassiopeia (Risāla fi'l-`amal bi'l-kura dhāt al-kursī) - Baghdad (12141/3, 12300), Berlin (5336), Bombay (86), Cairo (falak 3824/13, mīqāt 528-529, 702/3, 1223, Fāḍil maj. 180/21, Ḥalīm mīqāt 7, Taymūr riyāḍa 131/7), Damascus (4494), Edirne (713/14), Hyderabad (riyāḍa 120, Salar 136/2), Istanbul (BU 4627/3; Kandilli 30/1; Millet, Ali Emiri 4328/5; SM AS 2633, 2635/1, 2636-2637, 2638/1, Esat 2015/3, Ḥāmid. 1453/5; TK 3475/1, 3505/5), Konya (Yusuf Agha 6394/19), Leiden (591/2), London (407/10, 1615/7, Sup. 753/6, 7490/7, 9598/10), Manisa (6983), Mashhad (5595-5596), Medina (`Alī Ḥikmat maj. 49), New York (Columb. 285/1), Oxford (I 1297), Paris (2544/10), Princeton (Garr. 122, 1096, 2789, Yehuda 356, 3168), Tehran (1524-1525, Mahdawi 503, Univ. 1971). Description of the Berlin manuscript: Ahlwardt [1] (751-752), English translation and research: Worrell [1].

A2. Book on Operations with the Spherical Astrolabe (Kitāb al-`amal bi'l-asṭurlāb al-kurī) - Istanbul (TK 3505/3), Leiden (1053). Medieval Spanish translation: Alfonso X [1] (I 153-208). Research: Seemann and Mittelberger [1].

A3. Introduction to the Science of Stars (al-Madkhal ilā `ilm al-nujūm) - mentioned in KF. Introduction to Astronomy and Motions of Celestial Spheres and Planets (al-Madkhal ilā'l-hay'a wa ḥarakāt al-aflāk wa'l-kawākib) - the first and second titles are mentioned in KF and TH, respectively. Research: Schirmer [1] (85) - on the value of obliquity of ecliptic $\epsilon = 23^{o}51'20''$.

Me1. Book on Greek Weights and Measures (Kitāb fī'l-awzān wa'l-makāyyīl al-yūnāniyya) - St. Petersburg (Nat. Firk. 163).

Me2. Book on Lever Balance (Kitāb fī'l-qarasṭūn) - is mentioned in KF.

Ph1. [Commentary on Aristotle's "Physics"] - is mentioned in KZ (III 619).

Ph2. Book on the Burning Mirror (Kitāb al-marāya al-muḥriqa) - is mentioned in KF.

Mt1. Book on the Fan and Causes of Wind (Kitāb fī'l-mirwaḥa wa asbab al-rīḥ) - is mentioned in KF.

ME1. Book on Infection (Kitāb fī'l-i`dā'). Edition with German translation: Fahndrich [1]

PH1. Book on Distinction between the Spirit and the Soul (Kitāb al-faṣl bayna'l-rūḥ wa'l-nafs). Edition: G. Gabrieli [1].

PH2. [Treatise on Classification of Sciences]. Research: Daiber [4].

119. AHMAD AL-MISRI

Abū Ja`far Aḥmad ibn Yūsuf ibn Ibrāhīm al-Mis`rī (d. ca 910), son of Yūsuf ibn al-Dāya (No 80), mathematician, astronomer, and astrologer, author of commentary on Ptolemy's astrological work "Centiloquium"; worked in Cairo under the Tulunids (868-905). In medieval Europe he was known as "Ametus filius Josephi".

See: GAL (I 149), GAS (V 288-290, VI 193, VII 157), IHS (I 598), KF (268), KF² (20), KZ (III 68), MAA (42), MAA² (163-164), MAMS (II 111, III 362), SSM (39), TH (78), UA (I 119, 190, 207); Cantor [1], Lemay [3], Mieli [1] (82, 87), D. Schrader [1] (DSB), Stein-schneider [9], Tuqan [1] (213).

On his revision of Ptolemy's astrological work: Lemay [3].

M1. Book on Ratio and Proportion (Kitāb al-nisba wa'l-tanāsub) - Algiers (146/2), Cairo (Fāḍil riyāḍa 39/1, Ṭal`at maj. 635/3). The Latin exposition of the part of this treatise is included in the treatise of Bradwardine on proportions: Crosby [1] (74-76), English translation of this exposition: Crosby [1] (75-77). Research: Bürger and Kohl [1] (47-49), Cantor [1] (26, 187, 192), W. Schrader [1]. Commentary on the Book V of Euclid's "Elements".

M2. On Similar Arcs (Fī'l-qisiyy al-mutashābiha) - Oxford (I 941a). Description of the manuscript: Nicoll and Pusey [1] (602). Edition of the manuscript: Busard and Koningsveld [1] (388-406, even pp.). Edition of medieval Latin exposition: Curtze [3], edition of the text of medieval Latin Translation: Busard and Koningsveld [1] (380-405, odd pp.). Research: Busard and Koningsveld [1], Cantor [2]. Commentary on the Book III of Euclid's "Elements".

A1. On Tympanum for All Latitudes (Fī'l-ṣafīḥa li-kull al-`urūḍ) - Oxford (I 941).

120. `UBAYDALLAH IBN KHURDADHBIH

Abū'l-Qāsim `Ubaydallāh ibn `Abdallāh ibn Khurdādhbih (d. 912), geographer of Persian origin, worked in al-Jibāl and Samarra.

See: AGL (147-150), GAS (VII 848), IHS (I 606-607), KF (149); Arendonk [2a] (EI), Hadj-Sadok [1] (EI²), Maqbul Ahmad [10] (ENWC).

A1. Book on Anwā' (Kitāb al-anwā') - is mentioned in KF.

G1. Book of Roads and Provinces (Kitāb al-masālik wa'l-mamālik). Edition with French translation by Barbier de Meynard: Ibn Khurdadhbih [1], by De Goeje: Ibn Khurdadhbih [2]. Russian translation by Velikhanova: Ibn Khurdadhbi [3]. Research: Velikhanova [1].

121. YAHYA AL-MUNAJJIM

Abū Aḥmad Yaḥyā ibn `Alī ibn Yaḥyā ibn Abī Manṣūr al-Munajjim (856-912), grandson of Yaḥyā ibn Abī Manṣūr (No 31) (hence his name al-Munajjim - astronomer), born and worked in Baghdad; philosopher-mu`tazilite, scholar of literature and music.

See: GAS (I 375-376), KF (143-144), MAMS (II 111); al-Bayhaqī [5] (71-72), Farmer [6].
Mu1. Treatise on Music (Risāla fi'l-mūsīqā) - London (2365, Sup. 823), Rampur (I 414).
Editions: al-Munajjim [1-2].

122. ABU'L-HASAN IBN ABI RAFI'

Abū'l-Ḥasan ibn Abī Rāfi' (9th c.), astronomer.
See: GAS (VI 206), KF (279), KF² (34), MAA (34), MAMS (II 112), TH (437).
A1. Book on the Distinction of Ascent (Kitāb ikhtilāf al-ṭulū') - is mentioned in KF.

123. ISḤAQ IBN KARNIB

Abū'l-Ḥusayn Isḥāq ibn Ibrāhīm ibn Zayd ibn Karnīb (9th c.), mathematician and astronomer, worked in Baghdad.
See: GAS (V 275), KF (273), KF² (26), MAA (43), MAMS (II 112).
M1. {Geometric Treatise} - is mentioned in the work (No 348, A18) of al-Bīrūnī [12] (Nos 1, 191-194).
A1. How to Learn how many Hours of the Day have Passed from the Given Altitude of the Sun (Kayf yu'lamu mā maḍā min al-nahār min sā'āt min qibal al-irtifā' al-mafrūḍ) - is mentioned in KF.

124. ABU KAMIL AL-MISRI

Abū Kāmil Shujā' ibn Aslam ibn Muḥammad al-Ḥāsib al-Miṣrī (850-930), mathematician, worked in Cairo (al-ḥāsib al-Miṣrī = Egyptian reckoner).
See: GAL² (I 390), GAS (V 277-281), IHS (I 630-631), KF (281), KZ (II 585, III 63, IV 10, V 27, 68, 168-169), MA (45, 52-67), MAA (43), MAA² (164), MAMS (II 112-114, III 362); Berggren [10] (108-111), Hartner [7] (EI²), Levey [1] (7-11), [2] (DSB), Neuen-schwander [1] (LM), Schub and Levey [1-2], Sesiano [26] (ENWC), Tuqan [1] (163-165), Yadegari [1].
Collection of Papers: "Abū Kāmil" [1]
M1. Book on Algebra (kitāb fi'l-jabr) = Calculus of Plane Figures (Ḥisāb al-suṭūḥ) - Istanbul (Kara Mustafa 379), Mashhad (96) - under the first title. Manuscript of the Hebrew translation by Finzi (ca 1475) - Munich (Hebr. 225) - under the title "Ḥishbon ha-shetaḥim", translation of the second title. Facsimile edition of the Istanbul manuscript: Abū Kāmil [4]. German translation: Weinberg [1], text of Hebrew translation by Finci and English translation by Levey: Abū Kāmil [2]. Research: MA (52-67); Chalhoub [2], Karpinski [3], Levey [1, 3], Sesiano [20], Yadegari [1]. Textbook of algebra: algebraic transformations, solution of quadratic equations (the second title of the treatise is explained by representation of expressions (x^2) and (ax) by squares and rectangles).
M2. Rarities of Arithmetic (Ṭarā'if al-ḥisāb) - Leiden (199/6, incomplete). There are more complete Medieval Latin translations in Paris (7377a/6), and Hebrew translations from Spanish. Edition by Sa'idan: Abū Kāmil [1]. German translation: Suter [22]. Research: Baygozhina [1-2], Sa'idan [4], Suter [22]. Part of the work M1. Problems of purchase of birds reduced to linear indefinite equations with several unknown quantities.
M3. Measurement of Pentagon and Decagon (Misāḥat al-mukhammas wa'l-mu'ashshar) - Istanbul (Kara Mustafa 379/2). There are Medieval Latin translations: Paris (7377a/5) and Hebrew translations. German translation from Latin: Suter [19]. Italian translation from Hebrew: Sacerdone [1]. Partial Russian translation: Abū Kāmil [3]. Research: Karpinski [3, 5]. Part of the work M1. Calculations of regular pentagon, decagon, and 15-gon in terms of radii of inscribed and circumscribed circles by means of quadratic equations.
M4. Comprehensive Book (al-Kitāb al-shāmil) = Comprehensive [Book] on Algebra and Almucabala (al-Shāmil fi'l-jabr wa'l-muqābala) = Perfect [Book] on Algebra and Almucabala (al-Kāmil fi'l-jabr wa'l-muqābala) - is mentioned in KZ (II 585, IV 10, V 27).
M5. Inheritance by Means of Roots (al-Waṣāya bi'l-judhūr) - Mosul (294/3); is quoted in KZ (V 168). Research: Lorch [16].
M6. Inheritance by Means of Algebra and Almucabala (al-Waṣāya bi'l-jabr wa'l-muqābala) - is quoted in KZ (V 68). It may coincide with M5.
M7. Book on Indefinite Problems (Kitāb al-masāil allatī hiya ghayr maḥdūda) - Istanbul (Kara Mustafa 379/2). English translation: Schub and Levey [2]. Research: Baygozhina [1-2], Levey [1], Schub and Levey [1-2].

M8. Measurement of the Land (Misāḥat al-araḍī) - Tehran (Senat 2672/6). French translation and research: Sesiano [25].
M9. Book of Measurement and Geometry (Kitāb al-misāḥa wa'l-handasa) - is mentioned in KF. It may coincide with M8.
M6. Book on Reunion and Separation (Kitāb fi'l-jam' wa'l-tafrīq) - is mentioned in KF. Suter [20] identifies this treatise with the work (No 179, M1) of Ibrāhīm.
M7. Book on Two Errors (Kitāb al-khaṭā'ayn) - is mentioned in KF.
M8. Sufficient Book (al-kitāb al-kāfī) - is mentioned in KF.
KF also mentions astrological works of Abū Kāmil.

125. MUHAMMAD IBN AL-ADAMI

Muḥammad ibn al-Ḥusayn ibn Ḥamīd (9-10th c.), known as "Ibn al-Ādamī" son of al-Ḥusayn al-Ādamī (No 85).
See: GAS (VI 179-180), IHS (I 630), KF (280), KF² (36), MAA (44), MAMS (II 114), TH (270-271, 282); al-Andalusi [1] (13, 49-51, 57-58).
A1. Great Zīj (al-Zīj al-kabīr) = Threading the Pearl Necklace (Naẓm al-'iqd) - is quoted by al-Andalusī [1] (49-51), in TH (270-271) and in the zīj (No 283, A1) by Ibn Yūnis [1] (126-128). After his death, it was finished by his pupil Qāsim ibn Muḥammad al-Madā'inī.

126. IBRAHIM IBN AL-HASSAB

Ibrāhīm ibn Yūnis (d. 920), known as "Ibn al-Hassāb" (son of a reckoner), was a judge in Qayruwan also knew arithmetic well.
See: MAA (44), MAMS (II 115); Ibn Adharī [1] (I 189).

127. AL-HASAN AL-NAWBAKHTI

Abū Muḥammad al-Ḥasan ibn Mūsā al-Nawbakhtī (d. ca 920) from the family of Nawbakhts (see al Nawbakht (No 7), al-Ḥasan ibn Sahl ibn Nawbakht (No 51) and Abdallah Ibn Nawbakht (No 52). Theologian, philosopher and astronomer.
See: GAL² (I 319), GAS (I 539-540, VI 176, VII 154-155), KF (177), MAMS (II 115); 'A. Iqbal [2] (128-165).
A1. Book of Objection to Ptolemy's Form of the Heaven and Earth (Kitāb al-radd 'alā Baṭlamyūs fī hay'at al-falak wa'l-arḍ) - see GAS (VI 176).
A2. Natural Arguments Extracted from Books of Aristotle Refuting those Who Believe That Celestial Sphere Is Living and Rational (Ḥujaj ṭabī'iyya mustakhraja min kutub Arisṭā ṭālīs fi'l-radd 'alā man za'ama anna al-falak ḥayy nāṭiq) - see GAS (VI 176).

128. DAWUD IBN SULAYMAN

Dāwūd ibn Sulaymān (9-10th c.), astronomer.
See: SSM (36-37).
A1. Book on Armillary Sphere (Kitāb dhāt al-ḥalaq) - Cairo (mīqāt 969/1). Treatise on the construction of armillary sphere in 4 chapters.
A2. Order of Operations with Rings (Ṣifa al-'amal bi'l-ḥalaq) - Cairo (mīqāt 969/1a). Treatise on the use of armillary sphere in 6 chapters.

129. ABU'L-QASIM AL-MUNAJJIM

Abū'l-Qāsim al-Munajjim (9-10th c.), astronomer, worked in Gurgan.
See: SSM (37).
A1. Operations with "Egg" and Sphere ('Amal bi'l-bayḍa wa'l-kura) - Cairo (mīqāt 969/2). Treatise on the use of celestial globes, written in 900 in Gurgan.

130. SALHAB AL-FARADI

Abu'l-`Abbās Salhab ibn `Abd al-Salām al-Faraḍī (d. 922) from Cordoba; (faraḍī = specialist in inheritance), arithmetician.

See: MAA (44), MAMS (II 115); Ibn al-Faraḍī [1] (I 164), Tuqan [1] (266).

131. IBRAHIM AL-ZAJJAJ

Abu Isḥāq Ibrāhīm ibn al-Sarī al-Zajjāj (844-923) (zajjāj = person dealing in glass), one of his first concerns was glass, he later taught grammar and astronomy; astronomer and vizier of Caliph al-Mu`taḍid (892-902).

See: GAL (I 111-112), GAL² (I 170), GAS (I 49, II 89, VII 352, VIII 99-101, IX 81-82), KF (61, 88), KZ (V 53), MAMS (II 115).

M1. Triangle (al-Muthallath) - Qazimiya (Mahfuz 287).

A1. Book on Anwā' (Kitāb al-anwā') - Cairo (Fāḍil mīqāt 122) - a fragment, is mentioned in KZ and quoted in "Chronology" (No 348, E1) by al-Bīrūnī. Research: Varisco [1].

132. YAHYA IBN AL-SAMINA

Abu Bakr Yaḥyā ibn Yaḥyā (d. 927), known as "Ibn al-Samīna", from Cordoba;, philosopher, philologist, jurist, physician, arithmetician and astronomer.

See: MAA (44), MAMS (II 116), UA (II 39); Ibn al-Faraḍī [1] (II 53), al-Maqqarī [2] (232), Tuqan [1] (260).

133. YAHYA IBN `AJLAN

Yaḥyā ibn `Ajlān (10th c.), from Zaragoza; jurist and arithmetician.

See: MAA (45), MAMS (II 116), UA (II 49).

134. YAHYA IBN ASAMA

Yaḥyā ibn Muḥammad ibn Asāma (10th c.), from Zaragoza; knowledgeable in inheritance.

See: MAA (45), MAMS (II 116); Ibn al-Faraḍī [1] (II 52).

135. AL-FADL AL-NAYRIZI

Abu'l-`Abbās al-Faḍl ibn Ḥātim al-Nayrīzī (d. 922), from Nayrīz near Shiraz, Fars; worked in Baghdad under Caliph al-Mu`taḍid; mathematician and astronomer. In some manuscripts and in KZ, his name was written as al-Tabrīzī differing from al-Nayrīzī only by diacritical dots. In medieval Europe he was known as "Anaritius".

See: GAL (I 244), GAL² (I 386-387), GAS (V 283-285, VI 191-192, VII 156), IHS (I 598-599), KZ (V 113, 388), MA (82-83), MAA (45-47), MAA² (164), MAA³ (171), MAMS (II 116-118), SSM (39), STMI (306), TH (254); S. Brentjes [13] (ENWC), Hogendijk [25] (EI²), Kapp [1] (III 67-68), Qurbani [1] (71-87), Sabra [11] (DSB), Tuqan [1] (237-238).

M1. Commentary on Euclid's "Elements" (Sharḥ Kitāb al-uṣūl li-Uqlīdis) - Leiden (399/1) - Books I-VI and beginning of Book VII. Edition with Latin translation of the Leiden manuscript: Besthorn and Heiberg [1]. Edition by Curtze of the Latin translation by Gherard of Cremona of Books I-X: al-Nayrīzī [1]. French translation of the section on the proof of Euclid's 5th postulate by Byzantine mathematician of 5-6th c. Aghānīs: Jaouiche [4] (127-136), Russian translation of the same section: Petrosyan and Rosenfeld [1] (154-159). German translation of the section on axioms and postulates: Rosenthal [6] (281-286). Research: Björnbo [1], Jaouiche [4] (31-35), Klamroth [1], Mansion [1], Matviyevskaya [19] (69-71), Plooij [1], Pont [1] (158-160), Rosenfeld [25] (43-45), [45] (43-44), Rosenfeld and Yushkevich [10] (18-22), Steinschneider [5], Suter [13]. Research: Brentjes S. [14].

M2. Treatise on the Proof of the Known Postulate of Euclid (Risāla fī bayān al-muṣādara al-mashhūra li-Uqlīdis) - Berlin (5927), Hyderabad (riyāḍa 331/5), Paris (2467/7), Tehran (Sipahsalar 597/2). Photo-reproduction of the Tehran manuscript: Qurbani (86-87). Russian translation by Abdurahmanov and Rosenfeld: al-Nayrīzī [2]. Research by Abdurahmanov and Rosenfeld: al-Nayrīzī [2]. E. Grigorian [2], Rosenfeld [25] (55-56), [45] (56-57), Rosenfeld and Yushkevich [10] (42-45). Research: Hogendijk [39].

M3. Letter to al-Qāsim ibn `Ubaydallah ibn Mūsā on the Knowledge of Instruments by which the Distances between Objects in the Air and on the Surface of the Earth, the Depth of Canyons and Wells, and the Width of Rivers Are Determined (Kitāb li'l-Qāsim ibn `Ubaydallāh ibn Mūsā fī ma`rifat ālāt <yu`rafu> bihā ab`ād al-ashyā al-shākhiṣa fī'l-hawā' wa allatī `alā basīṭ al-arḍ wa aghwār al-awdiyya wa'l-abār wa `urūḍ al-anhār) - Istanbul (SM AS 4830/15). Al-Qāsim ibn `Ubaydallah was Caliph al-Mu`taḍid's vizier.

A1. Book on Operations with the Spherical Astrolabe (Kitāb fī'l-`amal bi'l-asṭ`urlāb al-kurawī) - Escorial (II 961/6).

Description of the manuscript: Derenbourg [7] (99-100). Research: Seemann and Mittelberger [1] (32-40). Work in 4 books.

A2. Treatise on the Azimuth of Qibla (Risāla fī samt al-Qibla) - Paris (2457/17). German translation: Schoy [16] (60-67).

A3. Chapter on Drawing Temporal Hour [Lines] on Any Cupola or on a Used Cupola (al-faṣl fī takhṭīṭ al-sā`āt al-zamāniyya fī kull qubba aw fī qubba yusta`malu lahā) - Patna (2468/30). Edition: "al-Rasāil al-mutafarriqa" [1] (No 2).

A4. Treatise on Principles of Predictions of Conjunctions (Risāla fī uṣūl aḥkām al-qirānāt) - Cairo (ḥurūf 69/3). The treatise was dedicated to Caliph al-Muktafī (902-908).

A5. Commentary on "Almagest" (Sharḥ al-Majisṭī) - is mentioned in KZ (V 113, 388) and is quoted in "Chronology" (No 348, E1), "Mas`ūdic Canon" (No 348, A1), and "Geodesy" (No 348, G3) all by al-Bīrūnī [2] (39), [14] (279), [31] (64), and in works of al-Nasawī (No 341, M5) and al-Ṭūsī (No 606, M13). Two last references are connected with the spherical sine law. Therefore al-Nayrīzī's proof of this theorem was written in this work.

A6. Book of Proofs (Kitāb al-barāhīn) - is mentioned in KF.

A7. The Great Zīj (al-Zīj al-kabīr) - is mentioned in KF.

A8. The Little Zīj (al-Zīj al-Ṣaghīr) - is mentioned in KF.

KF also mentions al-Nayrizi's commentary on Ptolemy's astrological work "Quadripartitum".

A9. Operation of Division of Parallaxis for Longitude and Latitude by the Total Parallaxis by Means of Enveloping Tables (al-`Amal fī tamyīz ikhtilāf al-manẓar fī'l-ṭūl wa'l-`arḍ fī ikhtilāf al-manẓar al-kullī bi'l-jadwal) - is mentioned in the work (No 299, A4) of Ibn `Irāq [1] (Nos 4, 36-40, 51-52, 55-56).

A10. Commentary on the Book of Celestial Phenomena (Sharḥ Kitāb ẓāhirāt al-falak) - commentary on "Phenomena" of Euclid, is mentioned by al-Ṭūsī in his revision (No 606, A2) of this work.

A11. Zīj of al-Mu`taḍid (Zīj al-Mu`taḍid) - is mentioned in "Mas`ūdic Canon" (No 348, A1) by al-Bīrūnī [14] (675).

Mt1. Treatise on Atmospheric Phenomena (Risāla aḥdāth al-jaww) - Istanbul (SM AS 4832/20).

136. JABIR AL-HARRANI

Jābir ibn Sinān al-Ḥarrānī (second half of 9th c.), a Sabian from Harran (Turkey), constructor of astrolabes, in particular a spherical astrolabe described in "Astrolabes" (No 348, A5) by al-Bīrūnī; see Seemann and Mittelberger [1] (43-44).

See: GAS (VI 162), KF (285), MAA (224), MAMS (II 118).

137. MUHAMMAD AL-BATTANI

Abū `Abdallāh Muḥammad ibn Jābir ibn Sīnān al-Battānī (ca 850-929), famous astronomer, a Sabian from Harran (Turkey), son of Jābir ibn Sinān al-Ḥarrānī (No 136); worked in Raqqa and Baghdad. KZ (III 470, 562) gives information on his astronomical observations in Raqqa. In medieval Europe he was known as "Albategnius".

See: AGL (100-106), GAL (I 222), GAL² (I 397), GAS (V 287-288, VI 182-187, VII 611-615), HD (291), HD² (191), IHS (I 602-607), KF (279), KF² (35), KWA (II 80), KWA² (III 317), KZ (III 470, 562-564, IV 113, V 386), MAA (45-47), MAA² (164), MAMS (II 119-120, III 362), TH (280-281); Baldi [1] (447-458), al-Bayhaqī [1] (140), Delambre [1] (10-62), Hartner [13, 26], Krafft [3] (GWG), Nallino [4] (EI, EI²), [12] (IA), Rozhanskaya [6] (SeT), Sams" [29] (ENWC), Sayılı [18] (96-98), Tuqan [1] (241-248).

M1. Abstract of the Principles of the Composition [of the Tables] of Sines (Tajrīd uṣūl tarkīb al-juyūb) - Istanbul (SM Carullah 1499/3).

A1. Sabian Zīj (al-Zīj al-Ṣābī') = Collection on Calculation of Stars and Proved Positions of Their Motions (al-Jāmi` fī ḥisāb al-nujūm wa mawāḍi` masīrihā al-mumtaḥan) - Escorial (II 908), Milan (C 86), Oxford (I 913/10), Tehran (Tungabuni 110), Tunis (Zaytuna 2843); four last manuscripts are only fragments. Description of the Escorial manuscript: Derenbourg [7] (6). Edition of this manuscript with Latin translation by Nallino: al-Battānī [2]. Edition of a medieval Latin translation: al-Battānī [1]. Edition of Medieval Spanish translation by Bossong: al-Battānī [3]. Research: GAS (VI 183-186), SIAT (132-133, 154-156); Kunitzsch [10], [11] (49-50), Ragep [4], Swerdlow [1].

Zīj in 57 chapters: 1) introduction, 2-26) spherical astronomy (in chapters 11 and 17 the al-Khwārizmī's rules from (No 41, A6 and A7), since the first of these rules is equivalent to the spherical cosine law. Europeans were acquainted with this law through al-Battānī's Zīj and this law is often called "the Albategnius theorem", 27-48) on solar year and motion of the Sun, Moon, and planets, on calendars and hours, on horoscope and 12 astrological houses, on crescent visibility, 49-51) on fixed stars, on distances of the Sun, the Moon, the planets, and fixed stars from the Earth, and on their sizes, 52-55) on astrological questions, 56-57) on sundials and astronomical instruments. Tables: chronological (from Babylonian king Nebucadnezzar to Caliph al-Muktafī (902-908), trigonometrical (of sinūß and tanūß), of functions of spherical astronomy (for latitudes of Mecca, Baghdad, Harran, and Raqqa), of motions of the Sun, the Moon, and the planets and of their visibility, geographical coordinates of 273 cities and "middles of countries" (from the "Book of Geography" (No 103, G1) of Ibn Qurra).

KF informs that al-Battānī also wrote the second edition of this Zīj before 912.

A2. On the Azimuth of Qibla (Fī samt al-Qibla) - Paris (2457/17), is mentioned in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (199).

A3. Treatise on the Distance of Planets (Risāla fī bu`d al-kawākib) - is quoted in the Zīj (No 283, A1) of Ibn Yunis [1] (75).

A4. Book on Knowledge of Ascensions of Zodiacal Signs between Quadrants of Celestial Sphere (Kitāb ma`rifat maṭāli` al-burūj bayna arbā` al-falak) - is mentioned in KF.

138. `UMAR IBN `ABD AL-KHALIQ

`Umar ibn `Abd al-Khāliq (d. ca 932), from Aljeciras, Spain; knowledgeable in inheritance and arithmetic, was a judge in his native town, also supervised prayer times.

See: MAA (47), MAMS(II 120); Ibn al-Faraḍī [1] (I 265).

139. ABU'-L-`ABBAS IBN YAHYA

Abū'l-`Abbās ibn Yaḥyā (9-10th c.), mathematician.

See: GAS (V 300-301), MAMS (II 120).

M1. [Treatise on Geometry] - is mentioned in the work (No 174, M4) by Ibn Sinān [1] (Nos 6, 46).

140. BAKR AL-MARADI

Abū Muḥammad Bakr ibn Khāṭib al-Marādī al-Makfūf (10th c.), from Cordoba, grammarian, arithmetician; he knew poetry well.

See: MAA (47), MAMS (II 120); Ibn al-Faraḍī [1] (I 85).

141. HUBAB AL-FARADI

Abū Ghālib Ḥubāb ibn `Ibāda al-Faraḍī (10th c.), from Cordoba; arithmetician; the author of many works on inheritance; teacher of al-Faraḍī (No 199).

See: MAA (47), MAMS (II 120-121); Ibn al-Faraḍī [1] (I 93).

142. MUHAMMAD AL-RAZI

Abū Bakr Muḥammad ibn Zakarīyā al-Rāzī (865-925), famous alchemist and physician of the Middle Ages, founder of iatro-chemistry. He was born and studied in Rayy, worked in Baghdad. He was also a philosopher and mathematician. In Medieval Europe he was known by the names "Rhazes" and "Abubater".

See: GAL (I 229-236), GAL[2] (I 417-421), GAS (III 274-294, IV 275-282, 345, V 282, VI 187-188, VII 160, 271-272), HD (291), HD[2] (191), HMA (337-353). IHS (I 609-610), KF (299-302, 358), KF[2] (43), KWA (I 178), KWA[2] (III 311), KZ (II 5, 581, III 12, 108, 586, 640, IV 343, V 61, 245, 271, 280, VI 42, 186), MAA (47-48), MAMS (II 121-124, III 362), PI (268, 276, 390), PL (II 197-199, 435), STMI (6-7, 493-494); Abadi [1], al-Bayhaqi [1] (136), A. Bertel's [3], al-Bīrūnī [7], de Boer [3] (49-51), Farmer [4] (26), Gambaroghlu and Latifov [1], Sam. Hamarneh [5] (GAC), Hikmatullayev [3-4], Holmyard [2], Iskandar [7] (ENWC), Karimov [2], Komilov [2], Kraus [3], Kraus and Pines [1] (EI), [2] (IA), Marupov and Rosenfeld [1], Mieli [2], (132-133), Muhaqqiq [1], Marupov and Rosenfeld [1], Najmabadi [1-2], Pines [2] (EI), [9], [25] (DSB), A. A. Qadyrov [2-3], Qadyrov and Saipov [1-2], Ranking [1], Ruska [8, 11, 26], Schipperges [1] (SeT), Shad [3], Tuqan [1] (216-222), M. Usmanov [1-6], Wiedemann [187].

Al-Rāzī was an adherent of mathematical atomism. On his mathematical atomism see Kedrov and Rosenfeld [1] (51), Naṣīr-i Khusraw [7] (27-38, 71-118), Pines [1] (34-93), Sharipov [3] (40).

M1. Book on Time and Space (al-Kitāb fī'l-zamān wa'l-makān). Extractions of this book are in the works (No 374, PH1) of Ibn Ḥazm [1] (28-35), (No 393, PH1) of Naṣīr-i Khusraw [7] (96-108), and (No 535, PH1) of Fakhr al-Dīn al-Rāzī [5] (246-248). Edition of these extractions by Kraus: al-Rāzī [5] (241-279).

Al-Bīrūnī [7] (11-15) in (No 348, HS1) and Ibn al-Nadīm in KF mention following works of al-Rāzī in mathematics and astronomy:

M2. Treatise on [the Fact] that Diagonal of a Square is not Commensurable with [its] side without Geometry (Risāla fī anna al-quṭr al-murabba` lā yushāriku al-ḍil` min ghayr handasa). This treatise is based on mathematical atomism of al-Rāzī.

M3. What was [Discussed] by Him and Abū'l-Qāsim al-Ka`bī on the Subject of Time (Mā jarā baynahū wa bayna Abī'l-Qāsim al-Ka`bī fī'l-zamān). In this discussion with al-Ka`bī (No 146) who was an adherent of the mathematical atomism of Pythagorean type, Al-Rāzī undoubtly defended the mathematical atomism of Democritean type.

A1. Book on the Form of Universe (Kitāb hay`at al-`ālam).

A2. Book on the Cause of the Location of the Earth in the Center of the Celestial Sphere (Kitāb sabab wuqūf al-arḍ wasaṭ al-falak) = On the Cause of Location of the Earth in the Center of the Celestial Sphere (Fī `illat qiyām al-arḍ wasaṭ al-falak).

A3. On [the Fact] that the Stars Rise and Set from the Movement of Heaven and not from the Movement of the Earth (Fī anna ṭulū` al-kawākib wa ghurūbuhā min ḥarakat al-samā' dūna ḥarakat al-arḍ).

A4. [The Fact] that Stars are Extremely Round and have no Buttresses and Cavities (Fī anna al-kawākib `alā ghāyat al-istidāra laysa fīhā nutū` wa aghwār).

A5. On the Cause of the Movement of the Celestial Sphere in its Roundness (Fī `illat taḥarruk al-falak `alā istidāra).

A6. Treatise on [the Fact] that the Man who did not Learn [Mathematical] Demonstration Cannot Imagine that the Earth is a Sphere and People Live on it (Risāla fī annahū lā yutaṣawwaru li man yartaḍi bi'l-burhān anna al-arḍ kuriyya wa'l-nās ḥawlahā).

Ph1. Great [Book on] Matter (al-Hayūlā al-kabīr) = Book on Matter (Kitāb al-hayūlā). A fragment is quoted in the work (No 393, PH1) of Naṣīr-i Khusraw [7] (73-115). Partial German translation: Pines [1] (40-60). Edition of extractions by al-Rāzī by Kraus: al-Rāzī [5] (217-240).

Al-Bīrūnī and Ibn al-Nadīm also mention the works of al-Rāzī in physics and mechanics:

Ph2. Small [Book on] Matter (al-Hayūlā al-Ṣaghīr). The word "hayūlā" in the titles of Ph1 and Ph2 is the Arabic transcription of the Greek word "hyle" (matter).

Ph3. Book on Properties of Sight where it is proved that Sight does not occur by Means of Rays Issuing from the Eye and the Propositions of Euclid's Work on Optics are Refuted (Kitāb fī kayfiyyat al-ibṣār buyyina fīhi anna al-ibṣār laysa yakūnu bi shu`ā ` yakhruju min al-`ayn wa yunqaḍu fīhi ashkāl min kitāb Uqlīdis fī'l-manāẓir). Refutation of the doctrine of Euclid and Ptolemy on "visual sights" and foundation of the doctrine that sight occurs by means of light rays issuing from a source of light.

Ph4. Objection of al-Misma`ī against those who Assert that Matter is Eternal (al-Radd `alā al-Misma`ī fī raddihī `alā al-qā'ilīn bi qidam al-hayūla).

Ph5. Book on the Impossibility that the World is other than as Presented to our Eyes (Kitāb fī annahu lā yumkinu an yakūna al-`ālam lam yazal `alā mithāl mā nushāhiduhū).

Ph6. On the effect of Magnet on Iron. (Fī `illat jadhb maghnāṭis al-ḥadīd).

Me1. Book on the Body that Moves Independently and Movement that has a Natural Beginning (Kitāb fī anna al-jism yataḥarraku min dhātihī wa anna'l-ḥaraka <lahā> mabda' ṭabī'ī).
Me2. On the Difference between the Beginning of a Temporal Interval and the Beginning of Movement (Fī'l-farq bayna ibtidā' al-mudda wa bayna ibtidā' al-ḥaraka).
Me3. [Treatise on Physical Balance] - is mentioned in (No 476, Me1) by al-Khāzinī [1] (84). See Rozhanskaya [6] (113).
Ch1. Book of Mysteries (Kitāb al-asrār). German translation by Ruska: al-Rāzī [7]. Research: U. Karimov [7-8].
Ch2. Book of Mystery of Mysteries (Kitāb sirr al-asrār). Russian translation: Karimov [2].
ME1. Comprehensible Book (Kitāb al-ḥāwī) - medical encyclopaedia. Edition: al-Rāzī [8]. Latin translation: al-Rāzī [2]. On this work see GAS (III 278-281).
ME2. Book of al-Mansur on Medicine (Kitāb al-Manṣūrī fī'l-ṭibb) - abridgement of ME1. Latin translation: al-Rāzī [1]. Edition and French translation of the first book: Koning [1]. German translation of the section on ophtalmology: Brunner [1]. On his work see GAS (III 281-282).
ME3. [Medical Treatises]: a) Three treatises on anatomy, b) Treatise on Kidney and Bladder Stones (Kitāb al-ḥaṣā fī'l-kulā wa'l-mathāna), c) Guide of Nomad Physician or Aphorisms (Kitāb al-Murshida, al-Fuṣūl), d) Case histories. French translation of (a) and (b): Koning [1-2], English translation of (b) by Greenhill: al-Rāzī [4]. Edition of (c) with Latin translation: al-Rāzī [3], other editions of (c): Meyerhof [9], al-Rāzī [11, 17]. Edition by Kataya of (d): al-Rāzī [17]. Uzbeki translation by Hikmatullayev of (d): al-Rāzī [14]. Research of (d): Iskander [1]. Temkin [1].
ME4. Book on the Use of Food and its Harm (Kitāb manāfi' al-'aghdhiya wa daf' maḍārrihā). Edition: al-Rāzī [5].
ME5. Book of Introduction to the Art of Medicine, that is Isaguji (Kitāb al-madkhal ilā ṣinā'at al-ṭibb wa-huwa Izaghūjī). Spanish translation by Vasquez de Benito: al-Rāzī [16].
ME6. Sufficient Book on Medicine (Kitāb al-kāfī fī'l-ṭibb). Research: Iskander and 'Ubayd [1].
PH1. Philosophical Treatises. The most important philosophical treatises of al-Rāzī are: a) Book of Spiritual Healing (Kitāb ṭibb al-rūḥānī), b) Book on Philosophical Mode of Life (Kitāb al-sīra al-falsafiyya), c) Book on the Achievement of Happiness and Wealth (Maqāla fī imārat al-iqbāl wa al-dawla). Edition of these and other philosophical treatises of al-Rāzī together with M1 and Ph1 by Kraus: al-Rāzī [9]. Edition of (b): al-Rāzī [6]. English translation by Arberry of (a): al-Rāzī [10]. French translation by Kraus of (b): al-Rāzī [13]. Persian translation of (b) by Iqbal: al-Rāzī [12]. Russian translation of fragments by Usmanov and Sharipov: al-Rāzī [15]. Research of the parts on psychology: Druart [1].

143. MUHAMMAD IBN AL-SARRAJ

Abū Bakr Muḥammad ibn al-Sārī ibn Sahl al-Sarrāj (d. 928), philologist and naturalist, worked in Basra.
See: GAS (VII 353, IX 82-85), KF (62).
Mt1. Book on Winds, Air, and Fire (Kitāb al-riyāḥ, wa'l-hawā wa'l-nār) - is mentioned in KF.

144. MAKHUL AL-NASAFI

Abū Muṭī' Makḥūl ibn al-Faḍl (al-Mufaḍḍal) al-Nasafī (d. 930) from Balkh, theologist.
See: GAL² (I 357-358), KZ (III 405, V 104, 346), MAMS (II 125).
APh1. Book on Rays (Kitāb al-shu'ā') - is mentioned in KZ.

145. AL-HASAN IBN WAHB

Abū Muḥammad al-Ḥasan ibn 'Ubaydallāh ibn Sulaymān ibn Wahb (10^{th} c.), son of 'Ubaydallah ibn Sulaymān ibn Wahb (d. 901), vizier of Caliph al-Mu'taḍid; geometer.
See: GAS (V 264), KF (273), KF² (26), MAA (48), MAMS (II 125), TH (164); Tuqan [1] (263).
M1. Commentary on Difficulty on Ratio in the Book of Euclid (Sharḥ al-mushkil min kitāb Uqlīdis fī nisba) - is mentioned in KF.

146. ABU'L-QASIM AL-KA`BI

Abu'l-Qāsim `Abdallāh ibn Aḥmad ibn Maḥmud al-Ka`bī al-Balkhī (d. 931), from Balkh, theologian-mu`tazilite and philosopher, adherent of mathematical atomism; worked in Baghdad and Balkh.

See: GAL² (I 343), GAS (I 622-623, V 41), KZ (I 218, 491, II 192, 243, 352, IV 292, 353, V 41, 53, 412, 523, VI 7, 50), MAMS (II 125-126); Ibn al-Nadīm [3] (34), Pines [1] (6-10), Van Ess [2] (EIr).

PH1. Books (Maqālāt) - are quoted by al-Ash`arī (No 158), al-Naysaburī (No 159) and other Muslim philosophers. Al-Ka`bī, like Pythagoras, believed that geometric figures consisted of discrete points having no size and located on finite distances. His name al-Ka`bī and the name of his school "ka`biyya" (cubic) are explained by his representation of geometric figures in the form of cubic lattices consisting of material particles.

The treatise (No 142, M3) of al-Rāzī where his discussions with al-Ka`bī were also devoted to problems of mathematical atomism: al-Rāzī, like Democritus, believed that geometric figures consisted of discrete atoms having very small but finite sizes.

147. MUHAMMAD IBN ABI `ABBAD

Abu'l-Ḥasan Muḥammad ibn `Isā ibn Abī `Abbād (10th c.), constructor of astronomical instruments.

See: GAS (VI 206), KF (279), KF² (34), MAA (48), MAMS (II 125), TH (287).

A1. Book on the Use of Triqueter and Other [Instruments] (Kitāb al-`amal bi dhāt al-shu`batayn wa ghayrihā) - is mentioned in KF.

148. MUHAMMAD AL-HAKIM AL-TIRMIDHI

Abū `Alī Muḥammad ibn `Alī ibn al-Ḥasan ibn Bishr al-ḥakīm al-Tirmidhī (859-932) from Tirmidh (now Termez in Uzbekistan, on the Uzbekistan-Afghanistan border); theologian, mystic and astronomer.

See: GAL (I 216), GAL² (I 355-356), GAS (I 653-659), MAMS (II 124); Furat [1] (IA), Heer [1], Massignon [1] (EI), Yahya [1], Ziriklī [1] (VII 156).

A1. Yearbooks (Sāl-nāma) P - Bukhara (83), Dushanbe (353/3, 644/1, 774/3, 1112/4, 1211/1, 1769/7, 2475/10, Ferd. 1123, 1966, IYL 286/4), St. Petersburg (A 342, B 1952, 2141, C 1202, 1304), Tashkent (591/2, 2730/5, 3749/3, 3930/4, 4162/5, 5495/7, 8257/26, 8689/2, 9179/12). Descriptions of the Tashkent manuscripts: SVR (V 221-222). Edition: al-Tirmidhī [1].

A2. New Year Book (Nawrūz-nāma) P - Dushanbe (207/6, 363/3, 364/3, 644/3-4, 1112/6, 2030/5, 2095/1, IZA 120/2), Tashkent (1773/5, 2730/5, 6, 3930/3, 5214/9). Uzbeki translation: Tashkent (8257/26). Description of the Uzbek translation of the Tashkent manuscript: SVR (VII 265-266).

149. MUHAMMAD IBN DURAYD

Abū Bakr Muḥammad ibn al-Ḥasan ibn Durayd (838-933), physician and philologist.

See: GAS (VII 353-354, VIII 101-105, IX 85-85), HMA (I 365-368), KZ (V 53), MAMS (II 124); Pedersen [1] (EI), Pellat [1].

A1. Book on Anwā' (Kitāb al-anwā') - is mentioned in KZ.

150. ABU HASHIM AL-JUBBAI

Abū Hashim `Abd al-Salām ibn Muḥammad ibn `Abd al-Wahhāb al-Jubbā'ī (890-933) from Jubbā', Khuzistan; theologian and philosopher-mu`tazilite, founder of the school "bahshamiyya". He worked in Basra and Baghdad. His philosophical views are known according to expositions of al-Ash`ari (No 158), al-Naysaburī (No 159) and other Muslim philosophers.

See: GAL² (342-343), GAS (I 623-624, V 41), KF [3] (174), MAMS (II 127); Gardet [3] (EI²), Pines [1] (6-10), Streck [1] (EI).

151. ABU YAHYA AL-MARWAZI

Abū Yaḥyā al-Marwazī (or Māwaddī, d. ca 940), physician and geometer; teacher of Abū `Amr al-Mughāzilī, uncle of Abū'l-Wafā (No 256). He should not be confused with the Syrian physician of the same name, who was the teacher of Mattā ibn Yūnis (No 162).

See: GAS (V 303), KF (263), KF^2 (15, 48), KZ (I 486), MAA (48-49), MAMS (II 126).

152. MUHAMMAD BASTULUS ASTURLABI

Muḥammad ibn `Abdallāh Basṭūlus (Nasṭūlus) Asṭurlābī (first half of 10th c.) (Basṭūlus is a distortion of the word Apostolos, Nasṭūlus is a further distortion of this name, differing from Basṭūlus only by a dot over the first letter); he constructed astrolabes. The date 315 h. [927 A. D.] was written on one of his astrolabes. Al-Bīrūnī in (No 348, A5) wrote that he was the first constructor of the disc of eclipses (Wiedemann [140], 13). Ibn Sīnā in (No 317, A2) mentioned Basṭūlus as the constructor of astrolabes (Wiedemann and Juynball [1], 135).

See: GAS (VI 178-179), MAMS (II 126); King [14], King and Kunitzsch [1], Maddison and Brieux [1].

M1. On Combination of Two Projections (Fī tarkīb min al-tasṭīḥayn) - is mentioned by al-Bīrūnī in (No 348, A5 and A11).

153. AL-HASAN AL-AHWAL

Abū'l-Qāsim al-Ḥasan ibn Muḥammad al-Aḥwal (9-10th c.) (aḥwal = cross-eyed), constructor of astronomical instruments. In (No 348, A4) al-Bīrūnī [12] (Nos 2, 75), [47] (I 118) mentions the tangent-quadrant that he constructed.

See: MAMS (II 127); Madelung [1].

154. ABU'L-`ALA IBN KARNIB

Abū'l-`Alā ibn Karnīb (10th c.), son of Abū'l-Husayn ibn Karnīb (No 123), geometer, worked in Baghdad. He was one of the pupils of Ibn Qurra (No 103) and the teacher of Abū'l-Wafā' (No 256).

See: KF (263, 273, 263), KF^2 (15, 26, 48), MAA (49), MAMS (II 127); Meyerhof [3] (414).

155. SA`ID AL-DIMASHQI

Abū `Uthmān Sa`īd ibn Ya`qūb al-Dimashqī (10th c.), from Damascus, worked under Caliph al-Muqtadir (908-932), physician and translator of Greek medical, philosophical, and mathematical works into Arabic. He was the director of hospitals in Baghdad and other cities. He authored medical works, wrote commentaries on works of Ammonius, Alexander of Aphrodisias, and Aristotle. His translation of the commentary of Pappus on Book X of Euclid's "Elements" is very important for the history of mathematics (see Berggstrasser [3], Chasles [1], Heiberg [1] (169-170), Junge and Thomson [1], Matviyevskaya [5] (65-66), Woepcke [3]).

See: GAS (287), KF (8), KZ (I 382, V 66, 69), IHS(I 631), MAA (49), MAMS (II 127), TH (409), UA (I 205, 234); Kapp [1] (II 81), Tuqan [1] (212).

Ph1. [Commentary on Aristotle's "Physics"] - is mentioned in KF.

156. ABU ZAYD AL-BALKHI

Abū Zayd Aḥmad ibn Sahl al-Balkhī (850-934), from Balkh; pupil of al-Kindī (No 79) and his pupils; geographer, mathematician, astronomer, and physician.

See: AGL (194-197), GAL (I 263), GAL^2 (I 403), GAS (III 274, VI 190-191, X), KF (138), KZ (II 23, 395, III 38, IV 112, V 119, 509), MAMS (II 127-128), PL (II 117-120); al-Bayhaqi [5] (39), Dunlop [7], Huart [3] (EI), [5] (IA), Montgomery Watt [5] (EIr).

AM1. Book of Dignity of Mathematical Sciences (Kitāb faḍīlat `ulūm al-riyāḍiyyāt) - is mentioned in KF.

A1. Book of Commentary on Figures in "Book on the Heavens and the World of Abū Ja`far al-Khāzin" (Kitāb tafsīr ṣuwar Kitāb al-samā' wa'l-`ālam li-Abī Ja`far al-Khāzin) - is mentioned in KF. Commentary on the work of al-Khāzin (No 194, A9).

ME1. Forces of Bodies and Souls (Maṣāliḥ al-abdān wa'l-anfus). Edition: al-Balkhī [1].

G1. Pictures of Climates (Ṣuwar al-aqālīm) - London (Sup. 23542). This book includes a research of the map of the world. Mal'tsev [4].

157. BANU AMAJUR AL-TURKI

Abū'l-Qāsim `Abdallāh ibn Amājūr al-Turkī al-Harawī and his son Abū'l-Ḥasan `Alī (9-10th c.); astronomer-observers of Turkish origin from Farghana, worked in Baghdad and Shiraz. In the Zīj (No 283, A1) Ibn Yūnis [1] (120-178) mentions their astronomical observations made in 885-933.

See: GAL (I 397), GAS (V 282, VI 177-178), IHS (I 630), KF [1] (280), [2] (35, 68), MAA (49-50), MAA²(165), MAMS (II 128), SSM (38), TH (220-221); Pingree [66] (EI²), Sayılı [18] (101-105), Vernet [12] (EI²).

A1. Collection of Predictions according to Eclipses and Conjunctions of Planets (Jawāmi` aḥkām al-kusūfāt wa qirānāt al-kawākib) - Leiden (107), Paris (5894).

A2. Zīj of Checkered Shawl (Zīj al-ṭaylasān) - Paris (2486, 2513 - not complete).

In KF their following astronomical works are mentioned:

A3. Zīj without Errors (al-Zīj al-khāliṣ).

A4. Belted Zīj (al-Zīj al-muzannir).

A5. [Revision of] the Zīj of Sindhind (al-Zīj al-Sindhind).

A6. Sij of Transits (al-Zīj al-mamarrāt).

A7. The Marvellous Zīj (al-Zīj al-badī`).

On these Zījes: SIAT (125, 134-135), Sédillot [8].

A8. Traveller's Book of Supply (Kitāb zād al-musāfir) - is mentioned in KF.

A9. Book of the Slave (Kitāb al-qinn) - is mentioned in KF.

A10. Book of the Zīj of Mars according to the Persian Era (Kitāb zīj al-Marrīkh `alā'l-ta'rīkh al-fārisī) - is mentioned in TH.

A11. Treatises of Zīj of Ḥabash as corrected by Abū'l-Qasim ibn āmajūr (Rasāil zīj Ḥabash taṣḥiḥ Abū [ā]mājur) - are indicated on the title page of manuscript Cairo Taimūr riyāḍa 99 as contained (earlier) in this codex. Correction of one of the zijes Nos 46, A2, A3, A7 of Ḥabash al-Ḥāsib al-Marwazī.

158. `ALI AL-ASH`ARI

Abū'l-Ḥasan `Alī ibn Ismā`īl al-Ash`arī (873-935), born in Basra, lived and died in Baghdad. Founder of orthodoxal Islamic theology, kalām, the doctrine of mutakallims, based on the doctrine of atomistic structure of space and time, by means of which mutakallims substantiated that Allah constantly creates the world and no event in the world can occur without his will.

See: GAL (I 207-208), GAL² (I 345-346), GAS (I 602-604), IHS (I 625-626), KF (181), KWA (402), KWA² (440), KZ (II 351, III 354), MAMS (II 129), PI (IV 151-156); Anonymous [1], de Boer [3] (55-60), Ghuraba [1], Montgomery Watt [3] (EI)², Quadri [2] (37-57), Radev [1], Spitta [1], Wensinck [3].

Al-Ash`arī's doctrine on atomistic structure of space and time is exposed in (No 534, PH1) by Maimonides.

M1. Core of Arithmetic (Lubāb al-ḥisāb) - Mashhad (3619).

PH1. Book of Books of Muslims and All Who Pray (Kitāb maqālāt al-islāmiyīn wa ikhtilāf al-muṣallīn) - main exposition of the doctrine of Kalām. Editions of Ritter: al-Ash`arī [1- 2].

159. ABU RASHID AL-NAYSABURI

Abū Rashīd Sa`īd ibn Muḥammad ibn Sa`īd al-Naysabūrī (10-11th c.), philosopher and theologian, adherent of mu`tazilism; worked in Baghdad, Nishapur, and Rayy.

See: GAL² (I 344), GAS (I 626-627, V 31-32), MAMS (II 129); R. Frank [2] (EI²), Horten [4], Pines [1] (2).

PH1. Controversies between Theologians of Basra and Baghdad (al-Masāil fī'l-khilāf bayna al-baṣriyīn wa'l-baghdādiyīn). Research: Biram and Horten [1]. Exposition of controversies between adherents of al-Jubbā'ī (No 150) and al-Ka`bī (No 146) about two forms of mathematical atomism.

160. MUHAMMAD IBN LABIB

Abū `Abdallāh Muḥammad ibn Aṣbagh ibn Labīb (d. 939), from Estija, Spain, now Esija; studied in Cordoba and Mecca, worked in Spain; knew inheritance, arithmetic, and grammar well.
See: MAA (50), MAMS (II 129-130); Ibn al-Faraḍī [1] (I 346).

161. `UMAR IBN YUSUF

Abū'l-Ḥusayn `Umar ibn Muḥammad ibn Yūsuf (d. 940), jurist, worked in Baghdad; knew inheritance and arithmetic well.
See: KZ (IV 326, 410), MAA (50), MAMS (II 130); Flügel [4] (202).

162. MATTA IBN YUNIS

Abū Bishr Mattā ibn Yūnis (d. 940), Greek, Christian, physician, philosopher, translator from Greek into Arabic; teacher of al-Fārābī (No 180), worked in Baghdad, translated many works of Aristotle and commentary of Themistius on Aristotle's book "On the Heavens".
See: HD (304, 316), HD² (200, 208), IHS (I 629), KZ (I 486, II 5, III 96-97, 619, V 51, 97, VI 67), MAA (50), MAMS (II 130), KF (263-264), KF² (15), KWA (II 76-77), KWA² (307-310), UA (I 236); Baumstark [1] (230), al-Bayhaqī [1] (139), Meyerhof [1] (415), Safa [1] (73, 358-359).

163. AL-ISTAKHRI

Al-Iṣṭakhrī (9th 10th c.), from Istakhr, Fars; may be identified with the Baghdad judge Abū Sa`īd al-Ḥasan ibn Aḥmad ibn Yazīd al-Iṣṭakhrī (858-940). He was an examiner of measures and weights.
See: GAS (V 297), KF (282), KF² (38, 72), KWA (I 129), KWA² (I 374), KZ (I 221, V 48, 525), MAA (51), MAMS (II 130); Tuqan [1] (267).
M1. Book on Addition in Arithmetic (Kitāb al-jam` fī ḥisāb) - is mentioned in KF.
M2. Commentary on the Book of Abū Kāmil on Algebra (Sharḥ kitāb Abī Kāmil fi'l-jabr) - is mentioned in KF. Commentary on the work (No 124, M1) by Ḥāsib al-Miṣrı.

164. FATH AL-ASTURLABI

Fatḥ ibn Najiya al-Asṭurlābī (d. 940), constructor of astronomical instruments, worked in Baghdad.
See: KF (285), KF²(42), MAA (51), MAMS (II 130-131), TH (256).
M1. Book on Measurement (Kitāb al-misāḥa) - is mentioned in KF.

165. `ABDALLAH IBN RAFI`

Abū Muḥammad `Abdallāh ibn Abī'l-Ḥasan ibn Rāfi` (10th c.) geometer, son of Ibn Abī Rafi` (No 122).
See: GAS (V 303), KF (279), KF² (34), MAA (51), MAMS (II 131); Tuqan [1] (267).
M1. Treatise on Geometry (Risāla fi'l-handasa) - is mentioned in KF.

166. MUSA IBN YASIN

Abū `Imrān Mūsā ibn Yāsīn (10th c.), former slave; moved from Morocco to Spain, author of works on inheritance and arithmetic.
See: MAA (51), MAMS (II 131); Ibn al-Abbār [2] (I 378).

167. AQATUN

Aqāṭūn (Agathon?) (9-10th c.), mathematician, probably Christian.
See: MAMS (II 131).
M1. Book of Assumptions (Kitāb al-Mafrūḍāt) - Istanbul (SM AS 4830/5). Facsimile edition of the manuscript: Dold-Samplonius [7] (insertion). English translation: Dold-Samplonius [7] (59-88). Research: Dold-Samplonius [7-8]. Geometric treatise including the revision of Archimedes' Book "Elements of Geometry" by Ibn Qurra (No 103, M3).

M2. Book of Elements of Geometry (Kitāb fi'l-uṣūl al-handasiyya). Revision of this book by Sinān ibn Thābit ibn Qurra: (No 169, M1). Since the title of this work M2 is similar to the title of Archimedes' work revised by Aqāṭun in M1, these two works may coincide.

168. MUHAMMAD AL-NAHWI

Abū `Abdallāh Muḥammad ibn Ismā`īl al-Naḥwī (863-943) (al-naḥwī = grammarian) from Cordoba; grammarian and arithmetician.

See: MAA (51), MAMS (II 131-132); Ibn al-Faradī [1] (I 348), Tuqan [1] (264).

169. SINAN IBN THABIT

Abū Sa`īd Sinān ibn Thābit ibn Qurra (d. 942), son of Thābit Ibn Qurra (No 103), a Sabian who embraced Islam; court physician of Baghdad Caliphs al-Muqtadir (908-932), al-Qahir (932-934), and al-Rāḍī (934-940). His son Ibrāhīm mentioned his solar observations made in Baghdad in 860 in the work (No 174, A1) Ibn Sinān [4] (276). He and his son Ibrāhīm (No 174) were converted to Islam together by the order of Caliph al-Qāhir, but this was only a formality, actually they continued to adhere to Sabian customs. After this was revealed, they were persecuted then fled to Khurasan. Without their medical care, Caliph al-Qāhir died and Caliph al-Rāḍī called Sinān and Ibrāhīm back to Baghdad.

See: GAL (I 244), GAL^2 (I 386), GAS (II 105, V 291, VII 331), HD (299), HD^2 (197), MAA (51-52), MAMS (II 132), IHS (I 641), KF (272, 303), TH ((190-195), UA (I 224); Chwolsohn [1] (569-577), Dold-Samplonius [22] (ENWC).

UA mentions his following works:

M1. Improvement on the Book of Aqatun on Elements of Geometry (Iṣlāḥ kitāb Aqāṭūn fi'l-uṣūl al-handasiyya) - revision of the work (No 167, M2) of Aqāṭun.

M2. Book Dedicated to King Aḍud al-Dawla on Rectilinear Figures Inscribed in a Circle and Circumscribed about It (Maqāla anfadhahā ilā'l-malik `Aḍud al-Dawla fi'l-ashkāl dhawāt al-khuṭuṭ al-mustaqīma matā taqa`u fi'l-dāira wa `alayhā). The work is dedicated to Buyid Sultan `Aḍud al-Dawla (949-983).

M3. Improvement of Translation from Syriac into Arabic by Him from the Book of Yūsuf al-Qass from the Book of Archimedes on the Triangle (Iṣlāḥ wa tahdhīb limā naqalahū min kitāb Yūsuf al-Qass min al-suryāniyya ilā'l-`arabiyya min kitāb Arshimīdis fi'l-muthallath).

A1. Book on Anwā' (Kitāb al-anwā). This book is quoted numerous times by al-Bīrūnī in "Chronology" (No 348, E1); [15] (264-285). The work is dedicated to Caliph al-Mu`taḍid (892-902). Reserch: Samsó and Rodrigues [1], Samsó [7], Wiedemann [173].

A2. Treatise on Terrestrial Equator (Risāla fi'l-istiwā).

A3. Treatise on [the star] Canopus (Risāla fī Suhayl).

A4. Treatise on Stars (Risāla fi'l-nujūm).

A5. Treatise on the Subdivision of the Days of the Week by Seven Planets (Risāla fī qismat ayām al-jum`a `alā'l-kawākib al-sab`a) - Arabic revision of the Syriac treatise (No 103, A30) of his father, Ibn Qurra. The treatise is dedicated to his son Ibrāhīm (No 174).

170. AHMAD IBN NASR

Aḥmad ibn Naṣr (d. 944) from Cordoba, arithmetician and geometer.

See: GAS (V 391), MAA (52), MAMS (II 132-133); al-Ḍabbī [1] (195), al-Maqqarī [1] (II 119).

M1. Book on Measurement (Kitāb fi'l-misāḥa) - is mentioned by al-Maqqarī [1].

171. `ABDALLAH AL-MUGHILI

Abū Muḥammad `Abdallāh ibn Muḥammad al-Mughīlī (d. 946) from Cordoba, arithmetician.

See: MAA (52), MAMS(II 133); Ibn al-Faraḍī [1] (I 188).

172. HASSAN IBN HASSAN

Abū `Alī Ḥassān (or Ḥussān) ibn `Abdallāh ibn Ḥassān (890-946) from Esija, Spain; jurist, arithmetician; knowledgeable in inheritance.

See: MAA (52), MAMS (II 133); Ibn al-Faraḍī [1] (I 100).

173. AL-HASAN AL-HAMDANI

Abū Muḥammad al-Ḥasan ibn Aḥmad ibn Ya`qūb ibn Yūsuf ibn Dāwūd al-Ḥamdānī (d. 946), known by the name "Ibn al-Ḥā'ik" (son of a weaver); was born and lived in Yemen; his life ended in a prison in Yemen; grammarian, historian, geographer, poet, astronomer, and astrologer.

See: GAS (II 650, VII 164-165, 272-273), IHS (I 637), KZ (III 570), MAA (53), MAMS (II 133-134), MAY (20), SSM (39), TH (163); Arendonk [1] (EI), [5] (IA), Flügel [4] (220), Löfgren [1] (EI^2), Toll [1] (DSB), [2] (ENWC).

E1. Book of the Crown (Kitāb al-iklīl). Editions of section on geography: D. Müller [1-2]. Research: Wiedemann [109]. The book contains sections on physics, astronomy, geography, and astrology.

A1. Mysteries of Philosophy in the Science on Stars (Sarā'ir al-ḥikma fī `ilm al-nujūm) - Cairo (falak 7012), San`a (a private library). Edition by al-Akwa` al-Hiwali: al-Hamdani [1]. Description of the manuscript: GAS (VII 164-165). Chapter X of PH1. The extant fragment in 33 sections deals with mathematical astrology.

A2. Zīj (al-Zīj), - is mentioned in TH; see also KZ (III 570).

G1. Description of the Arab Peninsula (Ṣifat Jazīrat al-`Arab). Edition: D. H. Müller [1].

PH1. Book of Mysteries of Philosophy (Kitāb sarā'ir al-ḥikma) - is mentioned in TH.

174. IBRAHIM IBN SINAN

Abū Isḥāq Ibrāhīm ibn Sinān ibn Thābit ibn Qurra (908-946), son of Sinān ibn Thābit (No 169), grandson of Thābit ibn Qurra (No 103); physician, mathematician, and astronomer. He and his father were formally converted to Islam but they were persecuted and fled to Khurasan. After the death of Caliph al-Qāhir (924) they returned to Baghdad upon the invitation of Caliph al-Rāḍī.

See: GAL (I 244), GAL^2 (I 386), GAS (V 291-294, 402, VI 193-195, VII 274-275), IHS (I 631-632), KF (272), KF^2 (26, 59), KZ (I 399, V 48, 87, 113), MAA (53-54), MAMS (II 134-136), SSM (39), TH (57-59), UA (I 226); Berggren [10] (85-89), Rashed [5] (DSB), [42], [51] (ENWC), Sa`idan [2, 28], Tuqan (253).

HS1. Works of Ibn Sinān (Mu`allafāt Ibn Sinān). Exposition by Sa`idan: Ibn Sinān [4] (21-22).

M1. Book on Analysis and Synthesis and Other Operations in Geometric Problems (Maqāla fī ṭarīq al-taḥlīl wa'l-tarkīb wa sā'ir al-`amal fi'l-masā'il al-handasiyya) - Damascus (5648/6), Cairo (Fāḍil riyāḍa 40/10, Taymūr riyāḍa 323/2), Paris (2457/1), Patna (2468/3). Edition of the Patna manuscript: Ibn Sinān [1] (No 2). French translation: Bellosta [1]. Research: Bellosta [1], Rosenfeld and Rozhanskaya [2].

M2. Book on the Description of Three [Conic] Sections (Maqāla fī rasm al-quṭū` al-thalātha) - London (975/8), Patna (2468/4). Edition of the Patna manuscript - Ibn Sinān [1] (No 4), edition by Sa`idan: Ibn Sinān [4] (41-50). Russian translation by al-Dabbagh and Krasnova - Ibn Sinān [2]. Research: Muwafi [1], of Sa`idan - Ibn Sinān [4] (35-40, 51-52). Research of the use of projective transformations: Lyuter [2]. Description of 7 modes of point constructions of parabola, ellipse, and hyperbola. Ellipse is obtained by the use of a contraction to circle and by use of focal property of ellipse. Equilateral hyperbola ($x^2-y^2=a^2$) is obtained by the use of projective transformation ($x'=a^2/x$, $y'=ay/x$), arbitrary hyperbola is obtained from the equilateral hyperbola by use of contraction, hyperbola with semiaxes (a) and (b) is also constructed by "latus rectum" ($2b^2/a$ and) "latus transversum" (2a), and by the use of focal property of hyperbola.

M3. Book on Measurement of Parabola (Kitāb fī misāḥat al-qaṭ` al-mukāfī) - Damascus (5468/10), Cairo (Fāḍil riyāḍa 40/14, 41/28), Istanbul (SM AS 4832/16), London (II 444; Ind. 767/6), Paris (2457/26), Patna (2468/27). Edition of the Patna manuscript - Ibn Sinān [2] (No 5). Edition by Sa`idan: Ibn Sinān [4] (57-55). German translation: Suter [33]. Research of Sa`idan: Ibn Sinān [4] (55-56, 66). Research of use of affine transformations: Rosenfeld and Rozhanskaya [1].

M4. "Treatise on Geometry and Stars" - Treatise on the Description of Ideas Extracted by Him from the Science of Geometry and from the Science of Stars (Risāla fī waṣf al-ma`ānī allatī istakhrajahā fī `ilm al-handasa wa

`ilm al-nujūm) - Patna (2568/2). Edition: Ibn Sinān [1] (No 6). Edition by Sa`idan: Ibn Sinān [4] (23-30). Research of Sa`idan: Ibn Sinān [4] (19-20, 31). Research: Utsekha [4].

M5. Selected Problems (al-Masāil al-mukhtāra). Edition: Ibn Sinān [4] (309-317). Edition and research of Sa`idan: Ibn Sinān [4] (147-149, 265-269). Texts and research of the lost works of Apollonius: Hogendijk [9, 20], Lyuter [4-5].

M6. Treatise on the Astrolabe (Risāla fi'l-asṭurlāb) - Patna (2568/5). Edition: Ibn Sinān [1] (No 1), edition by Sa`idan: Ibn Sinān [4] (309-317). Research of Sa`idan: Ibn Sinān [4] (307, 318). Letter to Abū Yūsuf al-Ḥasan ibn Isrā'īl written in 946, containing the theory of stereographical projection used in the construction of astrolabes.

M7. Book on Tangent Circles (Kitāb fi'l-dawā'ir al-mutamāssa) - is mentioned in M1 of Ibn Sinān [1] (Nos 2, 30-31, 46). Cf. Vernet and Catala [2, 4].

M8. [Commentary on "Conic Sections" of Apollonius] - is mentioned in KF.

A1. Book on Motions of the Sun (Kitāb fī ḥarakāt al-shams) - Patna (2468/26). Edition: Ibn Sinān [1] (No 3), edition by Sa`idan: Ibn Sinān [4] (275-302). Research of Sa`idan: Ibn Sinān [4] (273-274, 303). Treatise on theory of the visible motion of the Sun.

A2. Book on Shadows (Kitāb fī aẓlāl) - Istanbul (SM AS 4832/16). German translation: Luckey [4] (132-190). Research - Luckey [4], Lyuter [1]. Treatise on the theory of sundials in two parts: 1) Construction of sundials, 2) Use of sundials. The Istanbul manuscript contains only the first part and the beginning of the second part. KZ informs that this treatise was written by Ibn Sinān when he was 16 years old.

A3. Book on Sundial (Kitāb al-rukhāma) - is mentioned in KZ (V 87).

A4. Book on Aims of the Work "Almagest" (Kitāb fī aghrāḍ kitāb al-Majisṭī) - is mentioned in KF.

A5. Book on what Claudius Ptolemy used for Simplification of Finding Inequalities of Saturn, Mars, and Jupiter (Kitāb fīmā kāna Baṭlamyūs al-Qalawdhī ista`malahū `alā sabīl al-tasāhul fī istikhrāj ikhtilāfāt Zuḥal wa'l-Mirrīkh wa'l-Mushtarī) - is mentioned in A1 by Ibn Sinān [2] (No 3, 64-65).

175. AHMAD IBN AL-QASS AL-TABARI

Abū'l-`Abbās Aḥmad ibn Abī `Alī ibn al-Qass al-Ṭabarī al-Baghdādī (d. 946), theologian, born in Tabaristan, worked in Tarsus (Turkey) and Baghdad.

See: GAS (I 496-497), SSM (36-37).

AG1. Indications of Qibla (Dalāil al-Qibla) = Book on Knowledge [of Qibla] (Kitāb al-ma`rifa) - Beirut (Safa 15), Cairo (mīqāt 1201), Istanbul (BU Veliyuddin 2453/2). Description: Safa [1] (439-442). Editions and research: Sezgin [19-19a]. Book in 11 chapters: 1) Measuring Qibla of Mecca, 2) Determining the positions of stars necessary for the determination of Qibla, 3) Determination of the Qibla of Mecca by stars. 4) Form of the Earth and its disposition around Kaaba, 5) The Longitude and Latitude of the Earth, 6) The Longitude and Latitude of Mecca and the Arabian peninsula, 7) The Longitudes and Latitudes of the Seas, 8) Rivers, 9) Climates, 10) Mountains, 11) Cities.

176. MUHAMMAD IBN `ARUS

Abū `Abdallāh Muḥammad ibn `Abdallāh ibn `Arūs (d. 949), from Mawzur located between Seville and Cordoba; knew languages and calculative mathematics well.

See: MAA (54), MAMS (II 136); Ibn al-Abbār [1] (I 99).

177. `ABD AL-RAHMAN AL-ZAJJAJI

Abū'l-Qāsim `Abd al-Rahmān ibn Isḥāq al-Zajjājī (d. 949), pupil of al-Zajjāj (No 131) (namesake of his teacher), philologist and astronomer, worked in Baghdad, Damascus, and Aleppo.

See: GAS (VII 354, VIII 105-106), SSM (36).

A1. Book on Anwā' (Kitāb al-anwā') - Cairo (Fāḍil mīqāt 198/2).

178. SA`ID AL-FARADI

Abū `Uthmān Sa`īd ibn Aḥmad "`Aynay al-Shāt" al-Faradī (d. 950), from Cordoba, arithmetician.

See: MAA (54), MAMS (II 136); Ibn al-Faraḍī [1] (I 144).

179. IBRAHIM

Ibrāhīm (9-10th c.), mathematician; "Abraham" in the only extant Latin translation (therefore some historians of mathematics identify him with Jewish mathematician Abraham ibn Ezra, 1090-1167). Suter [11] proposed to identify him with Ibrāhīm ibn Yūnis "Ibn al-Hassāb" (No 126), with Ibrāhīm ibn Aḥmad ibn Mu`ādh al-Sha`bānī from Cordoba, or with Ibrāhīm ibn Muḥammad ibn Ashah al-Fahmī from Toledo (No 361).

See: GAS (V 396-398), MAA (20), MAMS (II 136-137); Cantor [2] (730-733).

M1. Book on Augmenting and Diminishing (Liber augmenti et diminutionis) - perhaps the misrepresentation of the Arabic title: Kitāb fī'l-jam` wa'l-tafrīq - "Book on Reunion and Separation". Edition: Libri [1] (304-376). Research: Hughes [2-3]. Collection of problems reduced to linear equations. 7 chapters named according to topics of problems. Problems are solved by the method of single false position, by the method of double false position (hence the title of the treatise), by inversion and by substitution ("rule of injunction" - regula infusa) invented by al-Baṣrī (No 38).

180. MUHAMMAD AL-FĀRĀBI

Abū Naṣr Muḥammad ibn Muḥammad ibn 'Ùzlugh ibn Ṭarkhān al-Fārābī (874-950), born in Fārāb where the waters of Arys joined the Syr-darya, (now in Kazakhstan); he came from Turkic military aristocracy, studied in Baghdad and Harran (Turkey) under Christian scholars Mattā ibn Yunis (No 162) and Yuhanna ibn Haylan; worked in Damascus and Aleppo. Al-Fārābī was one of greatest Islamic philosophers, the founder of Eastern Aristotelism, "Second Teacher" (al-mu`allim al-thānī) - after Aristotle. In Europe he was known as "Alfarabius".

See: GAL (I 232-236), GAL^2 (I 375-377), GAS (III 298-300, 378, IV 288-289, V 195-296, IX 233-235), HD (316), HD^2 (208), HMA (I 359-361), IHS (I 628-629), KWA (II 76), KWA^2 ((III 307), KZ (I 229, II 5, 469, III 92, 96-98, 633, IV 432, V 58, 69, 94, 272, VI 97), MA (169-171), MAA (54-56), MAA^2 (165), MAMS (II 137-144), PI (IV 7-18), TH (227-280), UA (II 134-140); Abdildin [1], Adnan [3] (IA), Ateş [1], S. al-Azzawi [1], Bayhaqi [1] (141-142), [5] (35-37), Berggren [10] (90-96), Bielawski [1], de Boer [3] (78-116), Carra de Vaux [17] (EI), Dawari [1], Demidchik [1], Dieterici [8-9], Farmer [4] (27-29), Farrukh [1], Gafurov [2], Gafurov and Qasymjanov [2], Goha [1], S. Grigorian [1] (60-70), Günaltay [1], Haas [1] (LM), Nammond [1], Horten [9], Ignatenko [7] (57-98), Irisov [3, 10], A. Ivanov [1], al-Jaburi [1], Janybekov [3-5], Jariqbayev [1], Jawtyqov [1], Jawtyqov, Mashanov, Qasymjanov, and Kubesov [1-2], [8] (16-29), S. Karimov [1], Kaziberdov [1-2], Kaziberdov and Mutallibov [1], Kedrov [3], Kedrov, Esenov and Qasymjanov [1-2], Kharenko [1-4], Khayretdinova [4], Khayrullayev [3-17], Kubesov [1, 5, 11, 14-15, 17, 20], Kubesov and Janybekov [1], Madkour [2], Mahdi and Wright [1] (DSB), Mammond [1], Mashanov [1-4], Mashanov, Kubesov, and Qasymjanov [1], Marquet [5], Matviyevskaya [11, 17], Matviyevskaya and Tllashev [6] (10-11), Mieli [2] (94-96), Nasyrov [2], Netton [1], Nysanbayev [1], Osherovich [1-2], Qasymjanov [1-5], Qasymjanov, Lukonin, and Kharenko [1], Quadri [2] (71-94), Qulmuradov [1], Radev [1] (120-130), N. Rescher [1], Rosenfeld and Kubesov [1-2], A. Sa`di [2], Sadiq [1], Safa [1] (179-194), Sayılı [5, 8], Sirajdinov and Matviyevskaya [3], Steinschneider [4], Strohmaier [2], Tajikova [1], Tawkelev and Saparghaliyev [1], Ueberweg [1] (304-307), Ülken [4] (119-179), Urazbekov [1], Walzer [1] (EI^2), V. Zahidov [6], Zajaczkowski [1], Zavadovskiy [5].

Memorial collections - "al-Fārābī" [1-4]. Collection of Papers: "al-Fārābī" [1]

E1. The Second Doctrine (al-Ta`līm al-thānī) - is mentioned by Taşköpri-zade [4] (320) in (No 974, EI) as an encyclopaedical treatise that was the prototype of (No 317, E1) of Ibn Sīnā. The title is connected with al-Fārābī's nickname "Second Teacher". Since the structure of this work was similar to the structure of Ibn Sīnā (No 317, E1), this work contained the expositions of metaphysics, logic, physics, geometry, arithmetic, astronomy, and theory of music. Therefore it is very plausible that (A1, Mu1, and PH9) on astronomy, music and logic, are the extant parts of al-Fārābī's work (No 180, E1).

M1. Commentary on the Introduction to the First Book of Euclid by Abū Naṣr Muḥammad ibn Muḥammad al-Fārābī (Sharḥ ṣadr al-maqāla al-ūlā min kitāb Uqlīdis li-Abī Naṣr Muḥammad ibn Muḥammad al-Fārābī), Commentary on the Introduction to the Fifth Book of Euclid also by Abū Naṣr (Sharḥ Ṣadr al-maqāla al-khāmisa minhu li-Abī Naṣr aydan) - Escorial (618) = Commentary on Difficulties in the Introductions to the First and Fifth Books of Euclid (Sharḥ al-mustaghlaq min muṣādarāt al-maqāla al-ūlā wa'l-khāmisa min Uqlīdis) mentioned in UA. Medieval Hebrew translations by Ibn Tibbon: Munich (Hebr. 35, 290). English translation of the Escorial manuscripts: Shamsi [3] (35-45). French translation of the Escorial manuscripts: Freudenthal [2]. Russian translation of the Munich manuscripts by Bockstein: al-Faæraæbı¾ [14], [26] (230-272). Research: Freudenthal [2], Shamsi [1, 3]. Commentary on Books I and V of Euclid's "Elements"

contains critique of Euclid's order of fundamental notions of geometry and Euclid's theory of ratios. Discussion on Aristotle's and Democritus' notions of space.

M2. Book of Spiritual Clever Tricks and Mysteries of Nature on the Subtlety of Geometric Figures (Kitāb al-ḥiyal al-rūḥāniyya wa'l-asrār al-ṭabī`iyya fī daqāiq al-ashkāl al-handasiyya) - Uppsala (Tornberg 324). Russian translation by Krasnova and Kubesov: al-Fārābī [26] (60-229). Russian translation of the revision by Abū'l-Wafā' by Krasnova (No 256, M3): Abū'l-Wafā' [1]. Research: Bulatov [1], Kubesov [8, 12-13, 19], Kubesov and Rosenfeld [1]. Geometric constructions in 10 textbooks, plus introduction on clever geometric tricks as cases of mathematical clever tricks. Books: 1) determination of the center of a circle, trisection of an angle, point construction of a parabola, 2) construction of regular polygons by ruler and compass and by ruler and compass with a fixed spread, 3) construction of inscribed regular polygons, 4) construction of circumscribed regular polygons, 5) construction of circle inscribed in polygons, 6) construction of polygons inscribed in polygons and circumscribed around them, 7) subdivision of triangles, 8) subdivision of quadrangles, 9) subdivision and composition of aquares, 10) constructions on sphere.

M3. Book of Introduction to Imaginary Geometry (Kitāb al-madkhal ilā'l-handasa al-wahmiyya) - is mentioned in UA.

M4. Book on Space and Magnitude (Kitāb fī'l-ḥayyiz wa'l-miqdār) - is mentioned in UA.

A1. Commentary on Almagest (Sharḥ al-Majisṭī) - London (7368/1), Tehran (10945). Russian translation of the books I-V by al-Dabbagh and Kubesov: al-Fārābī[25]. Bulgarian translation from Russian: al-Fārābī [39]. Research: Kubesov [7, 16, 18], Kubesov - al-Fārābī [36] (7-45), Kubesov and Rosenfeld [2], al-Fārābī [36] (351-452). Research of the trigonometrical section - R. Ibadov [5], Kubesov [15] (85-107), Khayretdinova [4]. Commentary on Ptolemy's "Almagest"

A2. Book of a Supplement (Kitāb al-lawāḥiq) - London (7368/2). Russian translaton by Kubesov: al-Fārābī [26] (52-89). Research: Kubesov [7], [15] (108-142). Supplement to "Almagest" devoted to trigonometry and its application to astronomy.

A3. Treatise on Certain and Doubtful Predictions of Stars (Risāla (Nukat) fīmā yaṣiḥḥu min aḥkām al-nujūm) = Book on Edification (Treatise) on Refutation of Prediction of Stars (Kitāb al-tadhākīr (Risāla) fī ibṭāl aḥkām al-nujūm) - Hyderabad (III 756, Salar 113/8). London (Sup. 7518), Lucknow (Nadwa al-`ulama', hikma 49), Qumm (Mar`ashi), Rampur (I 400, II 840), Tashkent (2385/32, 57), Tehran (9688, Univ. 2110/4, Ilah. 686d/2). Description of the Tashkent manuscript - SVR (V 222-223). Edition and German translation by Dieterici - al-Fārābī [3] (104-114), [4] (170-186), Russian translation by Kubesov and Sharafutdinova - al-Fārābī [26] (273-316). Research: Kubesov [3]. Research of the meaning of this subdivision of events for history of probability calculus: Kolman [1]. Critique of judiciary astrology. Subdivision of events on the necessary, probable, and impossible.

Ph1. Book of High Reasoning on Elements of the Science of Physics. (Kitāb maqālāt al-rafī`a fī uṣūl `ilm al-ṭabī`a). Edition with Turkish translation: Lugal and Sayılı [1].

Ph2. Word on Vacuum (Kalām fī'l-khalā'). Edition with English and Turkish translations - Lugal and Sayılı [2]. German translation with research: Daiber [2a]. Russian translation by Osherovich: al-Fārābī [30]. "Materialy" [2] (140-146). Research: Daiber [3], Sayılı [7].

Ph3. [Optical Treatise]. Medieval Hebrew translation: Rome, see Steinschneider [3] (73).

Mu1. The Great Book of Music (Kitāb al-mūsīqā al-kabīr) - Istanbul, Köprülü 953, Leiden (141 - fragment, 651), Madrid (Gg 82, earlier was in Escorial), Milan (289). Edition of Khashaba - al-Fārābī [19]. Edition with English translation: Farmer [4], French translation - d'Erlanger [1] (I 1-325, II 1-99). Russian translation of a fragment - al-Fārābī [32], Uzbeki translation by Seidov - Khayrullayev [3] (242-251). Russian translation of chapter on harmony by Tajikova: al-Fārābī [30] (203-226). Research: M. Ahmedov [1], Barkashli [1], Janybekov [1-2, 6], Qasymjanov and Qurmanghaliyeva [1], I. Rajabov [3]. Edition of manuscript Köprülü 953: al-Fārābī [46].

Mu2. Introduction to Music (al-Madkhal fī'l-mūsīqā) - Cairo (V 1426), Hyderabad (III 486), London (Sup. 833/12), Istanbul (Köprülü 953; SM Kılıç 674; Ragıp 876).

Mu3. Abridgement of the Science of Music (Istiqṣār `ilm al-mūsīqā) - Escorial (906), Madrid (602).

Mu4. Research of a Question in the First Book in the First Science on Music (Taḥqīq mas'ala min al-maqāla ūlā min al-fann al-awwal fī'l-mūsīqā) - Cairo (riyāḍa 899/9).

PH1. Enumeration of Sciences (Iḥṣā al-`ulūm) - Escorial (I 646/3), Istanbul (Köprülü 1604/1), Paris (9335), Princeton (Yehuda 308). Edition of the Istanbul manuscript by Amin - al-Fārābī [13]. Latin translation by Gherard of Cremona - al-Fārābī [1]. Spanish translation by Palencia - al-Fārābī [13], Russian translation by Mohammed and Osherovich - al-Fārābī [25] (105-192). Persian translation by Hidiw Jam - al-Fārābī [22].

Uzbeki translation - Khayrullayev [3]. Kazakh translations - al-Fārābī [23, 28]. Translations of the chapter on mathematics: German - by Wiedemann [28] (79-98). Russian - by Kubesov and Mohammed - al-Fārābī [26]. Edition of the chapter on music with medieval Latin and English translations: Bulatov [1-3] (architecture). Farmer [4] (10-31) (music). Research: Mahdi [6], Matviyevskaya [5] (104-106), Wiedemann [27].

PH2. Treatise on the Essence of Questions (Risāla fī `uyūn al-masā'il) - Berlin (5061), Istanbul (Köprülü 1604/3), Leiden (184/13, 820/1, 1002/7), Manchester (384/R), Tashkent (2385/7), Tehran (634).

Editions: al-Fārābī [3] (56-65), Qumayr [1] (Nos 9, 1). German translation by Dieterici: al-Fārābī [4] (92-107). Russian translations by Saghadeyev: al-Fārābī [41] (227-250), S. Grigorian [3] (165-175). Spanish translation: Alonso [1]. Research: Alanso [3], Janmatova [4]. Book in 21 chapters. Chapters 14-16 - on fundamental notions of geometry.

PH3. On Origin of Sciences (De ortu scientiarum). There are many manuscripts of medieval Latin translations in Paris, Munich, and Vienna. Latin translation by medieval manuscripts: Bāumker [1] (17-24). Russian translations by Rubin: al-Fārābī [45] (89-104), S. Grigorian [3] (148-155). Kazakh translation by Isqaqov: Isqaqov and Nazarov [1]. Edition of Latin translation of the chapter on music with English translation: Farmer [4] (41-51). Book in 4 chapters. In Chapter 1, causes of the appearance of arithmetic, geometry, astronomy, music, natural sciences, and "divine sciences" are discussed.

PH4. Ideas of Inhabitants of the Virtuous City (ārā' ahl al-madīna al-faḍila). Edition and German translation by Dieterici: al-Fārābī [2, 5], English translation by Walzer with introduction and commentary: al-Fārābī [41]. French translation by Jaussen, Karam, and Chlal: al-Fārābī [12], Spanish translation by Alfonso: al-Fārābī [42]. Russian translation by Saghadeyev - S. Grigorian [3] (156-195). Complete Russian translation by Mohammed and Saghadeyev: al-Fārābī [21] (193-377). Polish translation by Bielawski: al-Fārābī [18] (1-117). Research: Jahid [1]. Italian translation by Companini: al-Fārābī [17].

PH5. Treatise on Bases of Wisdom (Risālat fuṣuṣ al-ḥukm). Edition and German translation by Dieterici: al-Fārābī [3] (66-72), [4] (108-138). Edition: al-Fārābī [10] (No 9). Russian translation by Sal'ye: al-Fārābī [45] (251-270), "Materialy" [2] (132-14) (a fragment). Research: Horten [1].

PH6. Comments (Ta`liqāt). Edition: al-Fārābī [10] (No 4). Russian translation by Kaziberdov: Kaziberdov [2] (63-93), "Materialy" [2] (146-163), al-Fārābī [45] (271-314). Collection of 101 aphorisms related to philosophy, physics, and mathematics.

PH7. Philosophical Treatises besides PH1-6: a) Treatise on what must Precede the Study of Philosophy (Risāla fīmā yanbaghī an yuqaddam qabl ta`allum al-falsafa); b) Book on the Meaning of the Word Intellect (Maqāla fī ma`nā al `aql); c) Book of Common Views of Two Philosophers, Divine Plato and Aristotle (Kitāb fī'l-jam` bayna ra'yay al-ḥakīmayn Aflaṭūn al-ilāhī wā Arisṭuṭālīs); d) Book on Religion (Kītāb al-dīn). Edition and German translation of (a), (b), and (c) by Dieterici: Fārābī [2-3]. Edition and English translation of (d): al-Fārābī [20]. Edition of (c) Mahdi: al-Fārābī [44]. Persian translation of (c): al-Fārābī [39]. Russian translation of (a), (b), and (c): al-Fārābī [24-25], [35] (1-28). Russian translation of (d): al-Fārābī [37]. Kazakh translation by Mashanov of (a): al-Fārābī [16]. Kazakh translations by Saghyndaqov, Janghalin, and Ishmuhammedov of (a), (b), and (c): al-Fārābī [28]. Research: Kedrov, Esenov, and Qasymjanov [1-2], Gafurov and Qasymjanov [1], Mashanov [1]. Research of (c) and (d): Mahdi [2-3, 5].

PH8. Social and Ethical Treatises. a) Book of Indication of the Way to Happiness (Kitāb al-tanbīh `alā sabīl al-sa`āda); b) Book of Civil Politics (Kitāb al-siyāsāt al-madaniyya); c) Book of Aphorisms of the Man of Politics (Kitāb fuṣūl al-madanī); edition by Shahjahan: al-Fārābī [16] d) Book on Obtaining Happiness (Kitāb taḥṣīl al-sa`āda). Editions of (a), (b), and (d): al-Fārābī [10] (Nos 5, 8, 3). English translation of (b): al-Fārābī [31]. Russian translations of all four treatises: al-Fārābī [17]. Russian translation of (b): al-Fārābī [31]. Kazakh translations of all four treatises: al-Fārābī [33]. Polish translation of (b) by Bielawski: al-Fārābī [18] (119-207). Research: Dawari [1], Qasymjanov and Kharenko [1-2], A. U. Sadyqov [1-2].

PH9. Treatises on Logic: a) Sections Necessary in the Art of Logic (Fuṣūl yuḥtāju ilayhā fī ṣinā`at al-manṭiq); b) Book of Introduction to the Art [of Logic] (Kitāb al-Madkhal fī ṣinā`at [al-manṭiq]); c) Commentary on the Book "Categories" (Sharḥ kitāb al-Maqūlāt); d) Book of Sillogism (Kitāb al-Qīyās); e) Book on Topics of Sophistication (Kitāb al-amkina al-mughliṭa); f) Book of Terms Used in Logic (Kitāb al-alfāẓ al-musta`mala fī'l-manṭiq); g) Book of Analysis (Kitāb al-taḥlīl). Editions with English translations of first three treatises: Dunlop [4-6]. Edition by Mahdi of "Book on Terms": al-Fārābī [20]. Russian translations of the first five treatises: al-Fārābī [34] (99-438), Russian translation of "Book of Introduction" by Sharipov: "Materialy" [2] (128-132), al-Fārābī [45] (355-388), by Nuritdinov of "Book on Terms": al-Fārābī [45] (451-478). Research of (a-f): Burabayev, Kharenko, and Ivanov [1], Dunlop [4-6], Qasymjanov [2]. Research of (g): Mallet [1].

Treatise (b) is the revision of "Introduction" of Porphyry, treatises (c) and (d) are, respectively, revisions of "Prior Analytic" and "Book on Sophistical Refutations" of Aristotle.

PH10. Historical-Philosophical Treatises: a) Philosophy of Plato and Its Parts, Disposition of These Parts, and Their Order (Falsafat Aflāṭūn wa ajzā'uhā wa marātib ikhraqihā); b) Abridged Exposition of "Laws" of Plato (Talkhīṣ Qawānīn Aflāṭūn); c) Philosophy of Aristotle (Falsafat Arisṭuṭālīs); d) Aims of "Metaphysics" [of Aristotle] (Aghrāḍ Kitāb mā ba`d al-ṭabī`a); e) Commentary on a Treatise of Zeno the Great (Sharḥ risālat Zīnūn al-kabīr); f) Dialectic (al-Jadal); g) Johannes Grammarian (Iwān al-Naḥwī). Edition of (c) by Mahdi: al-Fārābī [44]. Russian translations of (a-f) by Qarayev and Tajikova: al-Fārābī [43]. Russian exposition of (g) by Kaziberdov: al-Fārābī [45] (443-450). Research of (f): Qarayev [1].

PH11. [Responses to] Philosophical Questions Adressed to him (Masā'il falsafiyya su'ila `anhā). Edition: al-Fārābī [6]. German translation by Dieterici: al-Fārābī [3]. Russian translation by Tajikova: al-Fārābī [45] (387-432).

PH12. Connection between Philosophy and Religion (Ilāqa bayna'l-falsafa wa'l-milla). Edition: al-Fārābī [8]. German translation by Dieterici: al-Fārābī [3]. Russian translation by Kaziberdov: al-Fārābī [45] (315-354).

Ch1. Treatise on the Necessity of the Art of Chemistry (Risāla fī wujūb ṣinā`at al-kīmiyā). Edition with Turkish translation: Sayılı [6]. Russian translation by Osherovich: al-Fārābī [35] (29-38).

ME1. On Objections to Galenus with Regard to His Discrepancy with Aristotle about Organs of the Human Body (Fī'l-radd `alā Jālīnūs fī mā nāqaḍa fīhi Arisṭuṭālis li a`ḍā al-insān). Russian translation by Osherovich - al-Fārābī [45] (39-50).

ME2. On Organs of the Human Body (Fī a`ḍā ` al-insān). Russian translation by Kaziberdov: al-Fārābī [45] (105-136).

Z1. Word on Organs of the Bodies of Animals (Kalām fī a`ḍā `al-ḥayawān). Russian translation by Kaziberdov: al-Fārābī [45] (148-166).

L1. Treatises on Rhetoric and Poetry: a) Book on Rhetoric (Kitāb al-khiṭāba), b) Treatise on Rules of the Art of Poetry (Risāla fī qawānīn ṣinā`at al-shi`r), c) Book on Poetry (Kitāb al-shi`r). Russian translations - al-Fārābī [34] (439-555). Research of (a): Aouad [1].

L2. [Treatise on Poetry and Rhythm] - Ankara (Univ. 4650). Edition with Medieval Latin and modern French translation and research: Sayılı [26].

L3. Book of Letters (Kitāb al-ḥurūf). Edition of Mahdi with English translation: al-Fārābī [21]. Incomplete Russian translation by Tajikova: al-Fārābī [45] (355-388).

181. SULAYMAN IBN `ISMA AL-SAMARKANDI

Abū Dāwūd Sulaymān ibn `Iṣma al-Samarkandī (9-10th c.), from Samarkand, worked in Balkh. His observations of obliquity of ecliptic in Balkh in 883-888 are described in "Geodesy" (No 348, G3) by al-Bīrūnī [30] (128-129, 235, 268).

See: GAL² (I 855), GAS (V 337-338, VI 170), KZ (I 382), MAA (56), MAMS (II 144), SSM (38); Abdullayev and Hikmatullayev [1] (13), Sayılı [18] (98-99).

M1. On Binomials and Apotoms from Tenth Book of the Work of Euclid (Fī dhawāt al-ismayn wa'l-munfaṣilāt alladhī min al-maqāla al-`āshira min kitāb Uqlīdis) - Cairo (riyāḍa 898/21), Leiden (14/20), Tunis (Ahmad. 5482/15).

Commentary on the second half of book X of Euclid's "Elements", is quoted in KZ.

M2. Treatise on Areas of Polygons (Risāla fī misāḥat dhawāt al-nawāḥī) - is quoted in "Chords" (No 348, M4) by al-Bīrūnī [23] (108).

M3. [Treatise on Composed Ratios] - is mentioned in (No 341, M3) by al-Nasawī, see Schirmer [1] (81).

A1. Zīj of the Sun and the Moon (Zīj al-nayyirayn) - is quoted by al-Bīrūnī [12] (Nos 1, 126-127, 165-167).

A2. [Commentary on "Almagest"] is mentioned in the work (No 341, M3) by al-Nasawi, see GAS VI 170.

A3. Book on the Construction of the Instrument for Determining the Visibility of the Crescent (Maqāla fī `amal al-āla li-ma`rifat ru'ya al-ahilla) - is mentioned in "Astrolabes" (No 348, A5) by al-Bīrūnī , see GAS VI 170.

182. QASIM AL-QATTAN AL-ANDALUSI

Abū Muḥammad Qāsim ibn al-Muṭarrif ibn `Abd al-Raḥmān al-Qaṭṭān al-Andalusī (9-10th c.), from Cordoba, theologian and astronomer.

See: GAS (VI 197-198), MAMS (II 145); Ibn al-Faraḍī [1] (I 410).

A1. Book on Astronomy (Kitāb al-hay'a) - Istanbul (SM Carullah 1279). Description: GAS (VI 197-198).

183. MUHAMMAD AL-QUMMI

Muḥammad ibn `Alī ibn Sa`īd ibn Samaka al-Qummī (9-10th c.), from Qumm, astronomer.
See: GAS (VI 207-208), KF (139), MAMS (II 145).
A1. Negotiations of Ibn Samaka al-Qummī with Ibn al-`Amīd (Mufāwaḍāt Ibn Samaka al-Qummī baynahū wa bayna Ibn al-`Amīd) - Tehran (Malik 6188). Exposition of an astronomical discussion with al-Kātib (No 195).

184. MUHAMMAD AL-TANUKHI

Abū'l-Qāsim `Alī ibn Muḥammad ibn Dāwūd al-Tanūkhī (892-953), from Antiochia (Antakya, Turkey); was judge in Basra and Ahwaz, worked at the court of Buyid Amīr Sayf al-Dawla, died in Basra; arithmetician, geometer, and astrologer.
See: KWA (I 353), KWA² (II 305), MAA (56), MAMS (II 145); Ibn Qutlubuga [1] (33).

185. `ALI IBN `IMRANI

`Alī ibn Aḥmad al-`Imrānī (d. 955), born and lived in Mosul; astrologer, arithmetician and geometer; teacher of al-Qābisī (No 205).
See: GAS (V 291, VII 166), IHS (I 632), KF (283), KF² (39, 73), MAA (56-57), MAA² (165), MAMS (II 145), TH (283); Tuqan [1] (254).
M1. Commentary on "The Book of Algebra and Almucabala" of Abū Kāmil al-Miṣrī (No 124) (Sharḥ kitāb al-jabr wa'l-muqābala li-Abī Kāmil) - is mentioned in KF. Commentary on the work of al-Miṣrī (No 124, M1).

186. `ALI AL-MAS`UDI

Abū'l-Ḥasan `Alī ibn al-Ḥusayn ibn `Alī al-Mas`ūdī (d. 956), born in Baghdad, scholar-encyclopaedist, travelled in Persia and India, sailed to the Sea of China and to Zanzibar; was author of works in history, geography, and other sciences.
See: AGL (171-182), GAL (I 150-152), GAL² (I 408), GAS (I 332-336, VI 198-203, VII 276-277), IHS (I 637-639), KZ (I 185-186, 190, 271, 434, 494, II 82, 146, 239, 439, 645, III 19, 137, 325, 339, 593, IV 108, 187, 368, V 137, 166, 500-501, 510, 607, VI 50, 551), MAMS (II 146), PL (II 51-52, 123); Brockelmann [17a] (EI), [22] (IA), Maqbul Ahmad [1-2], [6a] (DSB), Murzayev [1-2], M. Rahman [1] (ENWC), Shboul [1], al-`Ushri [1].
Memorial collection: "al-Mas`ūdī" [1].
E1. Golden Meadows and Mines of Jewels (Murūj al-dhahab wa ma`ādin al-jawāhir). Edition with French translation by Barbier de Meynard and Pavet de Courteille: al-Mas`ūdī [1], other editions - al-Mas`ūdī [2-3]. Survey of chapters on geography, astronomy, and astrology: GAS (VI 201-202).
G1. Book of Indication and Direction (Kitāb al-tanbīh wa'l-ishrāf). Edition by de Goeje: al-Mas`ūdī [4], French translation by Carra de Vaux: al-Mas`ūdī [5]. Research: Wiedemann [19].

187. `ALI IBN MAD`AN

Abū'l-Qāsim `Alī ibn al-Ḥasan ibn Ma`dān (9-10th c.), mathematician and astronomer.
See: GAS (V 303-304, VI 204), MAMS (II 146).
M1. [Mathematical Treatise] - is quoted in (No 174, M4) by Ibn Sinān [1] (Nos 6, 26)
A1. [Treatise on Doubts about Astronomical Topics] - Answer to the skepticism on lunar parallaxis; Istanbul (TK Haz. 455), Oxford (I 913, 940).

188. YUSUF AL-HARAWI

Yūsuf al-Harawī (10th c.), from Herat, author of astrological works.
See: KF (280), KF² (35), MAA (57, 212), MAMS (II 146-147), TH (391).
He is probably confused with Abū Bakr al-Harawī quoted by Ibn Qurra in (No 103, M24) or with Abū'l-Hasan al-Harawī quoted by al-Sijzī in (No 296, M6).

189. SA`ID AL-SAMARKANDI

Abu'l-Fatḥ Sa`īd ibn Khafīf al-Samarkandī (912ca - 1000), astronomer from Samarkand.

See: GAL[2] (I 400, II 1025), GAS (VI 216-217), MAA (199), MAA[2] (181), MAMS (II 147), SSM (43); Abdullayev and Hikmatullayev [1] (16), Voronovskiy [1] (116).

A1. Drawing Hour [Lines] (Takhṭīṭ al-sā`āt) - Paris (2506/1).

A2. Treatise on Determining Hours on Horizontal [Sundials] and Other Times of Night and Day (Risāla fī istikhrāj sā`āt al-basṭ wa sā'ir awqāt al-layl wa'l-nahār) - Istanbul (NO 2933/4).

A3. Plane Shadow Tables to Base Twelve for Each Minute in Two Digits (Jadāwil al-ẓill al-mabsūṭa al-ithnay `ashara maḥlūl daqīqa daqīqa `alā martabatayn) - Cairo (mīqāt 136/4, 715 - anonymous). Tables of the function ($y = 12 \cot x$) through (1') in two sexagesimal digits.

190. MUHAB AL-`ADAWI AL-FARADI

Abū Mūsā Muhāb ibn Idrīs al-`Adwī al-Faraḍī (d. 963), studied in Cordoba, worked in Esija, arithmetician also knowledgeable in inheritance.

See: MAA (57), MAMS (II 147); Ibn al-Faraḍī [1] (II 27).

191. `ALI AL-MUNAJJIM

Abū'l-Ḥasan `Alī ibn Hārūn ibn `Alī ibn Yaḥyā al-Munajjim (889-963), worked in Baghdad, astrologer (al-munajjim), poet, and musician.

See: GAS (I 377-378, II 84), KF (144), MAMS (II 147).

192. `ALI AL-TAMIMI

Abū Ḥātim Muḥammad ibn Aḥmad ibn Ḥibbān (or Ḥabbān) al-Bustī al-Tamīmī (d. 965), born in Bust in Sijistan; jurist, historian, physician, and astronomer; was judge in Samarkand, Nasa, and Nishapur.

See: KWA (I 507, II 96), KZ (I 205, II 100, 347, 355, 386, 491, 496, 591, III 622, IV 99, 119, 133, 251, V 55, 67, VI 231, 445), MAA (57), MAMS (II 148).

193. AHMAD AL-AHWAZI

Abū'l-Ḥusayn Aḥmad ibn al-Ḥusayn al-Ahwāzī al-Kātib (10[th] c.) (al-kātib = scribe), born in Ahwa; mathematician and astronomer.

See: GAL[2] (I 387), GAS (I 389, V 106, 312-313, VI 233, VII 407), KZ (I 382, IV 81), MAA (57-58), MAMS (II 148-149), SSM (40); Kapp [1] (II 47), Pingree [40] (EIr), Qurbani [1] (241-245).

M1. Commentary on the Tenth Book of the Work of Euclid (Sharḥ al-maqāla al-`āshira min kitāb Uqlīdis) - Berlin (5123 - incomplete), Cairo (falak 4528/1, riyāḍa 300/2), Istanbul (Millet, Feyzullah 1359/5 - incomplete, SM AS 2742/2), Leiden (1024/7), Oxford (I 143/38, 987/45), Paris (2467/18 - incomplete), Patna (2928/3), Princeton (Yehuda 358), Tehran (Univ. 949, Adab. 284/4), Tunis (Ahmad. 5482/3). Description of the complete Istanbul manuscript: SHIM (462). Research: Matviyevskaya [4] (277-278), [5] (199-209), [19] (26-31, 37-38). Treatise on 8 chapters: 1) Euclidean classification of lines, 2) Euclidean classification of areas, 3) "simple lines": rational, irrational of first, second etc. powers, 4) "composed lines" (binomials), 5) roots of binomials, 6) residues, 7) roots of residues, 8) connections of these lines. This classification contains 27 quadratic and biquadratic irrationalities which coincide with the Euclidean classification but is arithmetic and not geometric.

M2. Abridgement of Commentary on the Tenth Book of the Work of Euclid (Ikhtiṣār sharḥ al-maqāla al-`āshira min kitāb Uqlīdis) - Cairo (riyāḍa 898/20), Leiden (14/19 - incomplete).

A1. Commentary on the Zīj of al-Khwārizmī (Sharḥ zīj al-Khwārizmī) - is mentioned in (No 348, HS1) by al-Bīrūnī [7] (148). Commentary on (No 41, A1) of al-Khwārizmī.

A2. [Astronomical Treatise] - is quoted in "India" (No 348, E2) by al-Bīrūnī [21] (366).

Me1. Treatise on Balance (Risāla fī'l-mīzān) - Patna (2928/2).

HS1. Book on Science of the Byzantines (Kitāb ma`ārif al-Rūm) - is mentioned in "Chronology" (No 348, E1) by al-Bīrūnī [15] (319-323).

194. ABU JA`FAR AL-KHAZIN

Abū Ja`far Muḥammad ibn al-Ḥasan (al-Ḥusayn) al-Khāzin al-Khurāsānī (d. between 961 and 971), from Sabians, born in Khurasan, worked in Rayy.

MAA and MAMS distinguish Muḥammad ibn al-Ḥasan (No 124) and Muḥammad ibn al-Ḥusayn (No 183), their identity was established by Anbuba [7], Rashed [17] and in GAS VI.

See: GAL (I 246), GAL² (I 383, 387), GAS (V 106, 298-299, VI 189-190, VII 406), IHS (I 664, 718), KF (266, 282), KF² (17, 39), KZ (I 382, 394, II 584, V 49, 305-307, VI 170), MAA (58, 80), MAA² (168), MAMS (II 149-151, 201), SSM (39), TH (396); Anbuba [7] (98-100), Chwolsohn [1] (I 615-618), Dold-Samplonius [2] (DSB), Hogendijk [] (ENWC), Lorch [10], Mieli [2] (109-111), Pingree [43] (EIr), Qurbani [1] (88-94, 246-249), Rashed [17, 42], Samsó [8], Tuqan [1] (239-240, 340), Wiedemann [194] (EI).

M1. Commentary on the Tenth Book of the Work of Euclid (Sharḥ al-maqāla al-`āshira min kitāb Uqlīdis) = Commentary on the Introduction to the Tenth Book of the Work of Euclid (Tafsīr ṣadr al-maqāla al-`āshira min kitāb Uqlīdis) - Berlin (5924/3), Cairo (riyāḍa 898/19), Hyderabad (riyāḍa 331/5), Istanbul (Millet, Feyzullah 1359/6), Leiden (14/18, 1024/6), Paris (2467/17), Patna (2928/10), Princeton (Yehuda 358), Tehran (Univ. Adab. 284/3), Tunis (Ahmad. 5482/4). Russian translation: Matviyevskaya [16] (17-25). Research: Matviyevskaya [4] (209-213), [5] (273-280), [16] (14-17, 25-26). Treatise on explanation of the classification of irrational magnitudes in Book X of Euclid's "Elements" by numerical irrationalities.

M2. Treatise on the Construction of Rectangular Triangles with Rational Sides (Risāla fī inshā' al-muthallathāt al-qā'imat al-zawāyā al-munṭaqat al-aḍlā`) - Paris (2457/20). French translation and research: Woepcke [11]. In the treatise integer numbers represented as sums of squares are investigated and tables of integer solutions of equation ($x^2+y^2=z^2$) where (z=y+1) or (y+2) are given.

M3. Treatise on the Proof of Impossibility for the Roots of two Square Numbers whose Sum is a Square to be Odd but they both are Even or one of them is Even and another Odd (Risāla fī'l-burhān `alā annahu lā yumkinu an yakūna ḍil`ā `adadayn murabba`ayn yakūnu majmū`uhumā murabba`an fardayn bal yakūnān zawjayn aw [yakūnu] aḥaduhumā zawjan wa'l-ākhar fardan) - Paris (2457/49). Edition: Anbuba [8] (157-177). Russian translation by Rosenfeld: al-Khāzin [1]. Research: Anbuba [8], Rashed [17] (200-318), Rosenfeld [34] (composition of two quadratic forms equivalent to the multiplication of two complex numbers), Sa`idan [23].

Treatise contains three premises: 1) Proof that integer solutions of equation $x^2 + y^2 = z^2$ cannot be two odd numbers(x, y), 2) Proof that integer solutions of the same equation $\frac{x}{2}$ $(y+\frac{x}{2})$ where (x) is even and (y) is even or odd. "Treatise on construction of rectangular triangles" differs from M2 since here more general solutions of equation are $x^2 +y^2 =z^2$ are found. Here 1) it is proved that any solution of this equation has the form x = 2pq, $y = p^2 -x^2 +1\equiv 0$ (mod 5) is found in the form $x \equiv 2$ (mod 5), $y\equiv 3$ (mod 5), 3) some integer and rational numbers whose sum is a square are found, 4) indefinite equations $x^2 +y^2 =z4$ and $x^2 +y4 =z^2$ are solved, 5) the system of indefinite equations $x2\pm a$=square for given (a) is solved, 6) the problem of representation of two quadratic forms $x^2 +y^2$ and $u^2 +v^2$ as analogous form is solved by the rule equivalent to the multiplication of complex numbers (x+iy) and (u+I)v or (x+iy) and (u-iv). The numbers (x, y and u, v) which participate in this composition of forms are called "conjugate numbers" (`adadān al-qarīnān). Treatise is dedicated to `Abdallah al-Hasib (No 291).

M4. On Finding Two Mean Proportional Lines between Two [Given] Lines by the Method of Fixed Geometry (Fī istikhrāj khaṭṭayn bayna khaṭṭayn mutawāliyayn mutanāsibayn bi ṭarīq al-handasa al-thābita) - Paris (2457/47). French translation: Carra de Vaux [7]. Solution to the problem of finding two mean proportionals between two given lines without the use of motion.

M5. [Treatise on Proof of the Impossibility to Solve Equation $x^3+y^3=z^3$]. Exposition: Proof on Lines by Sheikh Abū Ja`far (Burhān al-khuṭūṭ` `an al-sheikh Abū Ja`far) - Oxford (I 913/37). Edition of this exposition with French translation: Rashed [17] (220-222).

M6. [Book on the Map of a Sphere that is Projected onto a Plane]. The only extant Medieval Latin translation: Florence (278).

M7. Proof for Seventh Proposition of the Book of Banū Mūsā (al-Burhān `alā'l-shakl al-sābi` min kitāb Banī Mūsā) - Berlin (5938), Istanbul (SM Carullah 1502), London (Ind. 1043), Tehran (Mu`tamid). Edition: "al-Rasā'il al-mutafarriqa" [1] (No 1). Commentary on the work of Banū Mūsā (No 74, M1) on determining the area of a triangle by its sides.

M8. Partial Research of the Declination of Partial Declinations and Ascensions in the Right Sphere (Maṭālib juz'iyya <fī> mayl al-muyūl al-juz'iyya wa'l-maṭāli` fī'l-kura al-mustaqīma) - is quoted in the work (No 606,

M14) of al-Ṭūsī [12] (157). The quoted fragment contains Khazin's proof of the spherical sine law. Research: Braunmühl [1] (67), Qurbani [1] (91), Suter [4].

M9. Improvement of the Book on Conic Sections (Islāḥ Kitāb al-makhrūṭat) - Algiers (1446/10 - a fragment on the trisection of an angle), Oxford (I 968/3). German translation of Algiers manuscript: Kohl [2]. Revision of "Conic Sections" of Apollonius plus exposition of application of conic sections for solving various geometric problems.

M10. [Treatise on the Solution of a Cubic Equation by Means of Conic Sections] is mentioned by al-Khayyām in (No 420, M1-M2); [25] (69), [26] (454) and in KZ (II 584). The equation solved in this treatise was composed by al-Māhānī (No 82).

M11. Book on Elements of Geometry (Kitāb al-uṣūl al-handasiyya) - is mentioned in (No 299, A5) by Ibn `Irāq.

A1. Wonderful Instruments of Observation (al-ālāt al-`ajība al-raṣadiyya) - Tehran (Sipahsalar 35). Description of the manuscript: Shīrāzī [2]. Sometimes this treatise is confused with the treatise (No 476, A3) of al-Khāzinī.

A2. Zīj of Tympanums (Zīj al-ṣafāiḥ) - Berlin (5857 - a fragment on astronomical instruments), Leiden (14/13 - a fragment on two problems in this zij). Research: King [25].

In "Chronology" (No 348, E1) and "Geodesy" (No 348, G3) al-Bīrūnī [15] (363), [30] (144) mentions chapters of this Zīj on the movement of the Sun. In the work (No 342, M3) of Abū'l-Jūd, a sentence of this Zīj on calculation of (sin 1^{o}) is quoted. This Zīj is critized and supplemented in (No 299, A5-A6) by Ibn `Irāq.

A3. Commentary on "Almagest" (Sharḥ al-Majisṭī, Tafsīr al-Majisṭī) - is mentioned in "Geodesy" (No 348, G3) and "Mas`ūdic Canon" (No 348, A1) by al-Bīrūnī [30] (128), [36] (II 45), and in his "Spherics" (No 348, M7).

A4. Great Introduction to Astrology (al-Madkhal al-kabīr ilā ilm al-nujūm) - is mentioned in "Chronology" (No 348, E1) by al-Bīrūnī [15] (198).

A5. Book on Distances and Volumes (Kitāb fi'l-ab`ād wa'l-ajrām) - is quoted in "Mas`ūdic Canon" (No 348, A1) by al-Bīrūnī [36] (II 424).

A6. Limit of Knowledge on Astronomy (Muntahā al-idrāk fī jalāl al-aflāk) - is mentioned in KZ (VI 170).

A7. Mystery of Two Worlds on Astronomy (Sirr al-`ālamayn fi'l-hay'a) - is mentioned in KZ (II 595).

A8. Treatise on Equation [of the Sun] (Risāla fī hal al-ta`dīl) - is mentioned in "Chords" (No 348, M1, M4), "Chronology" (No 348, E1), "Geodesy" (No 348, G3), and "Mas`ūdic Canon" (No 348, A1) by al-Bīrūnī [12] (Nos 1, 129, 170), [15] (283-284), [30] (102), [44] (28).

A9. Book on "On the Heavens and the World" (Kitāb al-samā' wa'l-`ālam) - is mentioned in KF (139). Commentary on this book: (No 156, A1).

A10. Book on the Proof of a Certain Construction of the Astrolabe (Maqāla fi'l-burhān `alā ba`d ṣan'at al-asṭurlāb) - is mentioned in the work (No 487, A1) by al-Samaw'al, see GAS (VI 190).

A11. Book of Proof (Kitāb al-bayān) - is mentioned in the work (No 487, A1) by al-Samaw'al, see GAS (VI 190).

A12. [Treatise on the Construction of Tympanum of Horizons] (al-ṣafīḥa al-āfāqiyya) - is mentioned in "Astrolabes" (No 348, A5) by al-Bīrūnī, see GAS (VI 190).

195. MUHAMMAD AL-KATIB

Abū'l-Faḍl Muḥammad ibn al-Ḥusayn ibn Muḥammad al-Kātib "Ibn al-`Amīd" (d. 970), worked in Rayy, vizier of Buyid Amīr Rukn al-Dawla (947-977); knew philosophy and astrology well.

See: KWA (II 57), KWA² (III 256), MAA (58-59), MAMS (II 151); Sayılı [18] (103-104).

196. HAMZA AL-ISFAHANI

Ḥamza ibn `Alī al-Isfahānī (893-970), born, lived and died in Isfahan, philologist, historian, and chronologist.

See: GAL (I 145), GAS (I 356-357, VI 210, 211), IHS (I 687), KF (139).

H1. Book of History on the Years of Kings of the Earth and Prophets (Kitāb Ta'rīkh sinī mulūk al-arḍ wa'l-anbiyā') - Leiden (831), London (Sup. 349/2 - a fragment), Milan H 30.

Edition: al-Isfahānī [1]. This book was one of the main sources of "Chronology" (No 348, E1) of al-Bīrūnī.

197. THABIT IBN SINAN

Abu'l-Ḥasan Thābit ibn Sinān ibn Thābit ibn Qurra (d. 974), son of Sinān ibn Thābit (No 169), grandson of Thābit ibn Qurra (No 103), brother of Ibrāhīm ibn Sinān (No 174), physician of Baghdad caliphs al-Rāḍī (934-940), al-Mutakkī (940-944), al-Mustakfī (944-946), and al-Mutī` (946-974); historian, mathematician and scholar of astronomy.

See: GAL (I 578-581), GAS (I 327), HD (316), HD² (208), KF (302), MAA (59), MAMS (II 151-152), TH (109-110), UA (I 224-226).

H1. [Continuation of the Historical Treatise of al-Ṭabarī] - continuation of al-Ṭabarī [1]. Extant fragments: in "Chronography" (No 349, H1) of Elias Bar Shinaya. Editions: Baethgen [1] (67-99), German translation: Baethgen [1] (143-150), French translation: Delaporte [1] (127-137).

198. YAHYA IBN `ADI

Abu Zakariyā' Yaḥyā ibn `Adī ibn Ḥāmid (893-974), born in Takrit, Syria, Christian-Jacobite, pupil of Matta ibn Yunis (No 162) and al-Fārābī (No 180), worked in Baghdad, philosopher and translator from Syriac into Arabic. He corrected the translations of Themistius' commentary on Aristotle's "On the Heavens" made by Matta ibn Yunis. He also translated the commentary of Alexander of Aphrodisias on Aristotle's "Meteorologics".

See: GAS (II 303-304, V 309), HD (317), HD² (209), HMA (I 376), IHS (I 629-630), KF (250-251, 264), KF² (8-10, 15), KZ (I 468, II 5, III 96-98, 619-620, V 51, 69, 97, 132, VI 97), MAA (59), MAMS (II 152-153), TH (362), UA (I 235); Baumstark [1] (231), al-Bayhaqi [5] (65-66), Endress [1], Meyerhof [1], Périer [1], Pines [28], Safa [1] (83-84, 359).

M1. Book on the Proof that all Continuous is Divisible to Discrete and it is Impossible for it to be Divisible to Continuous (Maqāla fī tabyīn anna kull muttaṣil innamā yanqasim ilā munqasim wa ghayr mumkin an yanqasima ilā mā lā yanqasim) - Paris (2457/34, Tehran (Tabatabai 1376/5; Univ. 4901/2). Treatise on the divisibility of all continuous to points and imposssibility of geometric atoms of finite sizes. Edition: Endress [3] (164-167). Research: Endress [1] (55-58), [2-3].

M2. Reasoning that Every Continuous [Thing] Is Divided to Constantly Infinitely Divisible Things (al-Qawl fī anna kull muttaṣil fa innahu munqasim ilā ashyā' tanqasim dā'iman bi-ghayr nihāya) - Paris 2457/34), Tehran (Tabatabai 1376/18; Univ. 4901/15). Edition: Endress [3] (167-175). Research: Endress [1] (55-58), [2-3].

M3. Reasoning on the Indivisible Particle (al-Qawl fī'l-juz' alladhī lā yatajazza') - Tehran (Tabatabai 1376/8; Univ. 4901/5). Edition: Endress [3] (175-179). Research: Endress [1] (55-58), [2-3]. In GAS V and TH Yaḥyā ibn `Adī's following mathematical works are mentioned:

M4. Book of Refutation on Saying that Solids Consist of Invisible Particles (Maqāla fī tazyīf qawl al-qā'ilīn bi-tarkīb al-ajsām min ajzā' lā tatajazza').

M5. Book that Diagonal [of a Square] Is Incommensurable with [Its] Side (Maqāla fī anna al-quṭr ghayr mushārik li'l-ḍil`).

M6. Book that None Existant Thing is Infinite by Number or by Size (Maqāla fī annahu laysa shay' mawjud ghayr mutanāhī lā `adadan wa lā `iẓaman).

PH1. On the Establishement of Nature of Possible (Fī ithbāt ṭabī`at al-mumkin). Edition: Ehrig-Eggert [2]. Research: Ehrig-Eggert [1- 2].

PH2. Book on Four Scientific Studies on the Art of Logic (Maqāla fī'l-buḥuth arba`a al-`ilmiyya `an ṣinā`at al-manṭiq). Edition with Turkish translation: Türker Küyel [1].

PH3. Apologetic Treatises. Edition with French translation by Périer - Ibn `Adī [1].

In GAS V and TH Yaḥyā ibn `Adī's following philosophical works are mentioned:

PH4. Book on Number and Joining (Maqāla fī'l-`adad wa'l-iḍāfa) = Book on the Proof that Number and Joining Exist in Numbers (Kitāb fī tabyīn anna li'l-`adad wa'l-iḍāfa dhātayn mawjudatayn fī'l-a`dād).

PH5. Book on Infinite (Maqāla fī'l-ghayr al-mutanāhī).

PH6. Book of Refutation of the Infinite Number (Maqāla fī ibṭāl anna al-`adad ghayr mutanāhī).

PH7. Book on Determination of the Hidden Number (Maqāla fī istikhrāj al-`adad al-muḍmar).

PH8. [Response on] the Section of the Book of Abu'l-Ḥabash al-Naḥwī where he Believes that Number [Can] be Infinite ([Jawāb `an] faṣl min kitāb Abī'l-Ḥabash al-Nahwī fī mā ẓannahu anna al-`adad ghayr mutanāhī).

199. MUHAMMAD AL-AZDI AL-FARADI

Muḥammad ibn Yūsuf ibn Naṣr al-Azdī al-Faraḍī (d. 976), lived in Esija, Cordoba, and Toledo; knew the subjects of inheritance and arithmetic well; father of historian Ibn al-Faraḍī (No 286).
See: MAA (59), MAMS (II 153); Ibn al-Abbār [1] (I 103).

200. THABIT IBN IBRAHIM AL-HARRANI

Abū'l-Ḥasan Thābit ibn Ibrāhīm ibn Zahrūn al-Ḥarrānī (ca 900 - ca 980), a Sabian from a branch that differs from Ibn al Qurra (No 103) and his descendants; physician and mathematician.
See: HD (324), HD² (213), KF (272, 303), KF² (26), MAA (59-60), MAMS (II 153), UA (227-230); Abū'l-Fida [1] (II 546), Krenkow [1a] (EI).

201. AHMAD AL-JAYHANI

Aḥmad ibn Muḥammad ibn Naṣr al-Jayhānī (10th c.), vizier of Samanid rulers in Bukhara; geographer and astronomer, one of the teachers of al-Bīrūnī (No 348).
See: AGL (219-224), GAL (228), GAL² (201), GAS (VI 211, X), IHS (I 635-636), KF (138); Pellat [5a] (EI²).

202. `ABDALLAH AL-SIRAFI

`Abdallāh al-Sīrāfī (10th c.), from Siraf on the Persian Gulf, father of al Hasan al-Sīrāfı (No 203); mathematician.
See: MAMS (II 153).
M1. Treatise on the Science on Line (Risāla dar `ilm-i khaṭṭ) P - Mashhad (4806).

203. AL-HASAN AL-SIRAFI

Abū Sa`īd (Zayd) al-Ḥasan ibn `Abdallāh ibn al-Marzubān al-Sīrāfī (d. 979), geographer and traveller, author of the book on India and China; jurist, philosopher, mathematician and knowledgeable in poetry.
See: GAS (IX 98-101), IHS (I 636), KF(62-63), KWA (I 130), KZ (I 385, 405, IV 109, 153, V 41, 98, 170, VI 94), MAA (60), MAMS (II 153-154); Abū'l-Fidā [1] (II 543), Ibn Quṭlubūghā [1] (17), Krenkov [2] (EI), [4] (IA).

204. YUHANNA IBN YUSUF

Yūḥannā ibn Yūsuf al-Ḥārith ibn al-Baṭrīq al-Qaṣṣ (d. ca 980), son of Yūsuf al-Qaṣṣ (No 117), Christian priest (al-qaṣṣ); worked in Hamadan. Translator of Greek mathematical and philosophical works into Arabic, in particular Euclid's "Elements". In "Mineralogy" (No 348, Mi1) al-Bīrūnī [22] (250) states that Yūḥannā ibn Yūsuf determined specific weights of minerals.
See: GAL² (I 389), GAS (V 298), KF(282), KF² (38), KZ (II 100, III 95, 97, 121, V 36, 164), MAA (60, 224), MAMS (II 154-155), TH (380); Kapp [1] (III 37), Steinschneider [8] (87-88), Tuqan [1] (263).
M1. Book on Rational and Irrational Magnitudes (Maqāla fī'l-maqādīr al-munṭaqa wa'l-ṣumm) - Paris (2457/48). Description of the manuscript: Woepcke [8] (665). Russian translation: Matviyevskaya [19] (42-48). Research: Matviyevskaya [4] (273-280), [5] (213-216), [19] (38-42, 48-51). Introduction contains rejections against the use of motion in geometry and the opinion that a line consists of points (by Aristotle); in the main part commensurability and incommensurability of magnitudes are explained by means of numerical irrationalities.
M2. On Meeting of Two Straight Lines Issuing From the Ends of a Straight Line under Angles [Together] Less than Two Right [Angles] (Fī iltiqā' al-khaṭṭayn al-mustaqīmayn al-khārijayn min ṭarafay khaṭṭ mustaqīm `alā zāwiyatayn aqall min zāwiyatayn qā'imatayn) = Book on Proof That If a Straight Line Falls onto Two Straight Lines Located on a Plane and Two Interior One-Side Angles Are Less Than Two Right [These Two Lines Meet] (Maqāla fī'l-burhan `alā annahu matā waqa`a khaṭṭ mustaqīm `alā khaṭṭayn mustaqīmayn mawḍū `ayn fī saṭḥ wāḥid ṣayyara al-zāwiyatayn al-dākhilatayn allatī fī jiha wāḥida anqaṣ min zāwiyatayn qā'imatayn). The first title is mentioned in M1 (see Matviyevskaya [19], 44), the second title is mentioned in KF. Treatise on the theory of parallel lines.
M3. Book of Abridgement of Two Geometric Tables (Kitāb ikhtiṣār jadwalayn fī'l-handasa) - is mentioned in KF.

M4. On Division of a Straight Line in Half (Fī inqisām khaṭṭ mustaqīm bi-niṣfayn) - is mentioned and critized by al-Sijzī in the treatise (No 296, M17).

205. `ABD AL-`AZIZ AL-QABISI

Abū'l-Ṣaqr `Abd al-`Azīz ibn `Uthmān ibn `Alī al-Qabīṣī (10[th] c.), well-known astrologer, pupil of al-`Imrānī (No 185), worked under Hamdanid Sultan Sayf al-Dawla (945-967); in Europe he was known as "Alcabitius" and "Alchabitius".

See: GAL[2] (I 399), GAS (V 311-312, VI 208-210, VII 170-171), IHS (I 669), KF (265), KF[2] (16), KWA (I 365), KWA[2] (II 375), KZ (V 473, 476), MAA (60-61), MAA[2] (165-166), MAMS (II 155-156), SSM (40); al-Bayhaqī [1] (158-159), [5] (62), Pingree [17] (DSB), [24] (EI[2]), Suter [43] (EI), Tuqan [1] (341).

M1. Treatise on Kinds of Numbers and Some Rarities of Actions Collected by Ancient Scholars of This Art (Risāla fī anwā` al-a`dād wa ṭarā'if min al-a`māl mimmā jama`ahā min mutakaddimī ahl al-`ilm bi-hādhihī al-ṣinā`a) - Istanbul (SM AS 4832/17). Edition: Anbuba [10]. Research: Anbuba [10], Sesiano [11] (arithmetic series). Treatise on summation of arithmetic series, both known to ancient and new mathematicians.

A1. Introduction to the Art of Prediction of Stars (al-Madkhal ilā ṣinā`at aḥkām al-nujūm) - Cairo (mīqāt 139 - anonymous, 144, 192/2, 488, ḥurūf 89/2), Gotha (65/2), Istanbul (SM Fatih 3439/20, Hamid. 856/2), Oxford (I 941/1). Latin translation by Ioannes of Seville: al-Qabīṣī [1].

A2. On Conjunctions of Planets in Zodiacal Signs (Fī qirānāt al-kawākib fī'l-burūj). Latin translation by Ioannes of Seville; al-Qabīṣī [2]. French translation by Finé: al-Qabīṣī [3].

A3. Treatise on Distances and Volumes (Risāla fī'l-ab`ād wa'l-ajrām) - Istanbul (SM AS 4832/18) - is quoted in "Mas`ūdic Canon" (No 348, A1) by al-Bīrūnī [44] (420, 424).

A4. Commentary on "Book of Sections" of al-Farghānī (No 67) (Sharḥ Kitāb al-fuṣūl li'l-Farghānī) - Istanbul (SM AS 4832/19). Commentary on the work (No 67, A1) of al-Farghānī.

A5. [Treatise on Determining the Sizes and Distances of Planets] - Dublin (Beatty 5254). Treatise differs from A3.

A6. Treatise on Examination of Astrologers (Risāla fī imtiḥān al-munajjimīn) - Damascus (4871). Description: GAS (VI 210).

A7. Problems for Examining Astrologers (Masā'il yumtaḥanu bihā al-munajjimūn) - Cairo (447/1).

A8. Doubts in "Almagest" (Shukūk al-Majisṭī) - is mentioned in A6, see GAS (VI 210).

A9. Reasons of Zijes (`Ilal al-zījāt) - is quoted in A3, see GAS (VI 210).

206. `ISA AL-RAQQI AL-TIFLISI

`Isā al-Raqqī al-Tiflīsī (10 th c.), came from Tiflis, Georgia, worked in Raqqa; physician and astrologer of Hamdanid Sultan Sayf al-Dawla (945-967).

See: MAA (61), MAMS (II 156), TH (429), UA (II 140).

207. `ABDALLAH AL-MASARRI

Abū Muḥammad `Abdallāh ibn Tamām ibn Azhar al-Kindī "al-Masarrī" (d. 984), born in Esija, worked in Cordoba, traveled in the East; taught arithmetic and was knowledgeable in inheritance.

See: MAA (61), MAMS (II 156); Ibn al-Faraḍī [1] (I 197).

208. LUBNA

Lubnā (d. ca 985), criptographist of Caliph al-Ḥakam II (961-976) of Cordoba; grammarian, arithmetician, also a calligrapher; she knew poetry well.

See: GAS (II 704), MAA(61), MAMS (II 156); Dabbī [1] (530), Ibn Bashkuwāl [1] (653).

209. ABU `ABD AL-MALIK AL-THAQIFI

Abū `Abd al-Malik al-Thaqifī (10[th] c.), physician, knowledgeable in geometry and Euclid's "Elements"; worked at the court of Cordoba Caliphs `Abd al-Raḥmān III (912-961) and al-Ḥakam II (961-976).

See: MAA (61-62), MAMS (II 156), UA (II 46).

210. AHMAD IBN AL-MUTHANNA

Aḥmad ibn al-Muthannā ibn `Abd al-Karīm (10th c.), astronomer.

See: MAMS (II 156-157); Suter [12].

A1. Explanation of the Zīj of al-Khwārizmī (Tawḍīḥ zīj al-Khwārizmī). There are medieval Hebrew and Latin translations. Edition of two Hebrew translations with English translation of Goldstein: Ibn al-Muthannā [1], Edition of the Latin translation by Hugo Sanctallenis and research: Millas Vendrell [1]. Research: Millas Vallicrosa [16].

211. `ALI IBN AL-A`LAM

Abū'l-Qāsim `Alī ibn al-Ḥusayn al-`Alawī (d. 985), known as "Ibn al ā`lam al-Sharīf al-Ḥusaynī al-Baghdādī"; astronomer and constructor of astronomical instruments, worked in Baghdad at the court of Buyid Sultan `Aḍud al-Dawla (978-983).

See: GAS (V 309, VI 215-216), HD (325), HD² (214), IHS (I 666), MAA (62), MAMS (II 157), TH (226, 235); al-Bayhaqī [1] (187), [5] (61-62), Tuqan (268).

A1. Zīj of `Aḍud al-Dawla (al-Zīj al-`Aḍudī) - is quoted in (No 283, A1) by Ibn Yūnis [1] (154, 170) and in "Transits" (No 348, A16) by al-Bīrūnī [12] (Nos 3: 23, 30, 54). Research: Kennedy [35], Mercier [4].

212. `ABD AL-RAHMAN AL-SUFI

Abū'l-Ḥusayn `Abd al-Raḥmān ibn `Umar al-Ṣūfī (903-998), born in Rayy, well-known astronomer, worked in Fars; friend and teacher of Buyid Ṣultan `Aḍud al-Dawla (978-983).

See: GAL (I 254), GAL² (214), GAS (V 309-310, VI 212-215), HD (325), HD² (214), HF (284), IHS (I 665-666), KZ (III 336, IV 113), MAA (62-63), MAA² (166), MAMS (II 157-159), PL (II 41-42), SSM (41), TH (226-227); Kunitzsch [4], [13] (DSB), [25, 40, 42a], [54] (ENWC), Matviyevskaya [31], Qurbani [1] (95-112), Samsó and Comes [1], Sayılı [18] (104-109), Stern [1] (EI²), Suter [24] (EI), Tuqan [1] (223-226), Winter [6[.

Collection of Paper: "al-Ṣūfī" [1].

M1. Treatise on the Construction of Polygons with Equal Sides (Risāla dar `amal-i ashkāl mutasāwiyya al-aḍlā`) P - Mashhad (5535/1).

A1. Book on Constellations of Fixed Stars (Kitāb ṣuwar al-kawākib al-thābita) - Beirut (198), Berlin (5658-5660), Cairo (mīqāt 390, 417/2, 831/2, 904, 1094/2, Ṭal'at mīqāt 258, Taymūr riyāḍa 241, 288, 325/2), Copenhagen (83), Dublin (Beatty 4119, 4222), Escorial (I 915), Istanbul (BU Veliyuddin 2278; NO 2928/1; SM Fatih 3422, Pertev 375; TK 3493), London (393, 5323, Sup. 7488; Ind. 731-732), Oxford (I 899, 916), Paris (2488-2492, 5036 - a copy from the library of Ulugh Beg), Princeton (1984, Yehuda 2259), Rome (Vat. Ross. 1033), St. Petersburg (C 724; Nat. ANS 191; Univ. 669); Tunis (Zaytuna 366), Washington (Congress). Persian translation of al-Ṭūsī (No 606) - Berlin (1854), Cairo (Fadil mīqāt farsi 9), Istanbul (SM AS 2595), Meshhad (23; Mawlawi 16/5). Abridged Persian translation: Berlin (332/3). Editions: al-Ṣūfī [2, 4, 6]. French translation by Schjellerup: al-Ṣūfī [1]. Latin translation: Argelander [1]. Edition of foreword with French translation: Caussin de Parceval [1]. Pictures of constellations: al-Bīrūnī [18] (151-158). Research: Caussin de Parceval [1], Kennedy [46], Kunitzsch [7] (50-56), [31-33], Kurtik [2], Strohmaier [6], Upton [1], Winter [6]. Catalogue of 1017 fixed stars found in Ptolemy's "Almagest" with exact coordinates and sizes of stars, and pictures of constellations.

A2. Book (Treatise) on Operations with the Astrolabe (Kitāb (Risālat) al-`amal bi'l-asṭurlāb) = Treatise on the Astrolabe (Risālat al-asṭurlāb) - Istanbul (SM AS 2642/2; TK 3509/1), Paris (2493, 2498, 5098 - incomplete), St. Petersburg (B 1029), Tehran (Sipahsalar 703-704; Univ. 480/3, 829/12, 830 /1, 2, 1041). Edition of the Paris manuscript 2493: al-Ṣūfī [3]. Edition: al-Ṣūfī [5]. Description of this manuscript: Kennedy and Destombes [1]. Description of the Istanbul manuscripts: SHIM (463). Description of the St. Petersburg manuscript: Dorn [1]. Research: Kunitzsch [37a, 40]. The first Paris manuscript contains 386 chapters; the Istanbul manuscripts AS and TK contain 170 and 402 chapters. In the foreword of the manuscript AS, it was written that this was an abridgement of the original text, which contained 1760 chapters and was dedicated to Buyid Amir of Fars Sharaf al-Dawla (983-990).

A3. Book on Operations with the Celestial Globe (Kitāb al-`amal bi'l-kura al-falakiyya) - Istanbul (TK 3505/1). Research: Kennedy [45], Lorch [12], Wittstein [3].

A4. Book of Introduction to the Science on Stars and Its Predictions (Kitāb al-Madkhal ilā `ilm al-nujūm wa aḥkāmihī) - Escorial (II 920), Istanbul (BU Qara Mustafa 381), London (Ind. 733), Paris (2330/2). Description

of the Escorial manuscript: Derenbourg [7] (27). General description: GAS (VII 168-169). Work in 5 books and 64 chapters. Book I contains description of the form of heaven, number of stars, sizes of celestial spheres and bodies and their distances from the Earth, movement of stars and planets, lengths of days in climates and countries, ascensions of zodiacal signs in climates, stars of the first and second magnitude.

A5. Treatise on Determining the past hours of Night by the Observation of Fixed Stars and Ascensions (Risāla fī ma`rifat <mā maḍā min> al-layl min sā`āt bi-qiyās al-kawākib al-thābita wa'l-ṭāli`) - is mentioned on the title page of the manuscript Cairo mīqāt 647 as the title of the treatise which was stated earlier in this manuscript.

213. IBRAHIM AL-ISTAKHRI

Abū Isḥāq Ibrāhīm al-Fārisī al-Iṣṭakhrī (10th c.), from Iṣṭakhr, Fars; traveller, geographer and cartographer.

See: AGL (146-147), GAL² (I 408), GAS (X), IHS (I 674); Anonymous [4] (EI).

G1. Book of Roads and Provinces (Kitāb al-masālik wa'l-mamālik). Edition by de Goeje: al-Iṣṭakhrī [2]. German translation of an abridged version: al-Iṣṭakhrī [1]. Research: Kramers [1]. Revision of the work (No 156, G1) of al-Balkhī with coloured maps for each country.

214. MUHAMMAD IBN AL-HAWQAL AL-NASIBI

Abu'l-Qāsim Muḥammad ibn Ḥawqal al-Naṣībī (10th c.), born in Nisibis (now Nusaybin in Turkey), traveller, geographer, and cartographer; lived in Baghdad, left Baghdad and began traveleling in 943 and met al-Iṣṭakhrī (No 213) who asked him to revise his work (G1) and maps.

See: AGL (199-210), GAS (X), IHS (I 674); Arendonk [1a] (EI), Calvo [7] (ENWC).

G1. Book of Roads and Provinces (Kitāb al-masālik wa'l-mamālik). Edition: by de Goeje: Ibn Ḥawqal [1]. French translation by Kramers and Wiet: Ibn Ḥawqal [2]. Research: Kramers [1]. Revision of the book (No 213, G1) of al-Iṣṭakhrī with the same title.

215. MUHAMMAD AL-MUQADDASI

Shams al-Dīn Abū `Abdallāh Muḥammad ibn Aḥmad ibn Abū Bakr al-Bannā al-Bashshārī al-Muqaddasī (or Maqdisī) (947 - ca 1000), born in Jerusalem; traveller and geographer.

See: AGL (210-218), GAL² (I 310), GAS (X), IHS (I 675); Fischer [1], Kramers [1a] (EI), Miquel [2] (EI²), M. Rahman [2] (ENWC).

G1. Best of Divisions for the Knowledge of the Climates (Aḥsan al-taqāsīm fī ma`rifa al-aqālīm). Editions: by de Goeje and by Ranking and Azoo [`Izzū]: al-Muqaddasi [1-2].

216. ABU `ALI AL-SUFI

Abū `Alī ibn Abī'l-Ḥasan al-Ṣūfī (10-11th c.) astronomer, son of al-Ṣūfī (No 212), worked at the court of Shahinshah Abū'l-Ma`ālī Fakhr al-Dīn (1143-1144).

See: GAL (I 253-254), GAL² (I 863), GAS (VI 232), MAA (212), MAA² (166), MAMS (II 159-160).

A1. Poem on Constellations of Fixed Stars (Urjūza fī ṣuwar al-kawākib al-thābita) - Bologna (422), Gotha (1398), Istanbul (SM Laleli 7698), Munich (870), Paris (2566/4), Princeton (Yehuda 211, 356), Tunis (Zaytuna 415). Description of the Bologna manuscript: V. Rosen [3]. Description of the Istanbul manuscript: SHIM (464). Edition: as appendix to the edition of his father's book (No 212, A1) al-Ṣūfī [4]. This work with poetic description of constellations of fixed stars with their images is sometimes ascribed to his father.

217. GHULAM ZUHAL

Abū'l-Qāsim `Ubaydallāh (`Abdallāh) ibn al-Ḥasan (d. 998), known by the name "Ghulām Zuḥal" (servant of Saturn). Reckoner and astrologer at the court of Buid Sultan `Adud al-Dawla (949-983), author of many astrological works.

See: GAS (VII 168), HD (327), HD² (215), KF (284), KF² (40), MAA (63), MAMS (II 160), SSM (40), TH (224-225); al-Bīrūnī [30] (131).

A1. Talk on Predictions by Conjunctions of the Moon with Planets in Zodiacal Signs (Guftagān dar aḥkām-i ittiṣāl-i qamar bā kawākib mutaḥayyira dar burūj) P - Tashkent (3953/2). Description of the manuscript: SVR (I 224-225). Research: Kurtik [2] (precession).

218. YUSUF AL-NAYSABURI

Abū'l-Ḥajjāj Yūsuf ibn Aḥmad al-Naysābūrī (10th c.), from Nishapur; mathematician.
See: GAL² (II 296, 1025), GAS (V 313), MAA (199), MAMS (II 160).
M1. Maturity of Pupils on Truths of the Science of Arithmetic (Bulūgh al-ṭullāb fī ḥaqā'iq `ilm al-ḥisāb) - Leiden (780).

219. `ALI AL-ANTAKI

Abū'l-Qāsim `Alī ibn Aḥmad al-Anṭākī al-Mujtabā (d. 987), from Antiochia (Antakya, Turkey). Mathematician; worked in Baghdad at the court of Buyid Sultan `Aḍud al-Dawla.
See: GAS (V 310, VI 216, VII 407), KF (266, 284), KF² (17, 40, 75, 78), KZ (I 382), MAA (63-64), MAMS (II 160-161), PL (II 42), TH (234); Kapp [1] (II 54-55), Tuqan [1] (255).
M1. Commentary on Euclid (Sharḥ Uqlīdis) - Oxford (II 281), see KZ (I 382).
KF mentions his mathematical works:
M2. Great Book of Board for Hindu Reckoning (Kitāb al-takht al-kabīr fī'l-ḥisāb al-hindī). Apparently, this work is mentioned also in mathematical treatise (No 341, M1) by al-Nasawī [1] (383).
M3. Book on Arithmetic on a Board without Wiping off (Kitāb fī ḥisāb `alā'l-takht bi-lā maḥw).
M4. Commentary on "Arithmetic" (Tafsīr al-arithmāṭiqā) - commentary on "Arithmetic" of Nicomachus.
M5. Third Chapter of the Commentary on the Book of Nicomachus of Gerasa Called "Arithmetic" (al-Maqā'la al-thālitha min sharḥ li-kitāb Niqūmākhūs al-Garsānī al-ma`rūf bi'l-Arithmāṭiqā) - Ankara (5311/11). The third book of M4.
M6. Book on Cubes (Kitāb fī'l-muka``abāt).
TH mentions his following mathematical works:
M7. Book on Numerical Criteria (Kitāb al-mawāzīn al-`adadiyya).
M8. Book on Reckoning without a Board, <but> by Hand (Kitāb al-ḥisāb bilā takht <bal> bi'l-yad) - on finger reckoning.
A1. Concise [Book] on the Knowledge of the crab-shaped Astrolabe (Mukhtaṣar dar ma`rifat-i asṭurlāb-i musarṭān) P - Mashhad (5285).

220. ABU'L-FATH AL-SAMARKANDI

Abū'l-Fatḥ al-Samarkandī (10th c.), from Samarkand, astronomer.
See: SSM (43).
A1. [Tables of Shadows] - Cairo (mīqāt 136/4), Tables of the function (12 cot x) computed for each minute of argument to (3) sexagesimal digits.

221. `ALI IBN BISHR

Abū'l-Ḥasan `Alī ibn Muḥammad ibn Ismā`īl ibn Muḥammad ibn Bishr (911-987), from Antiochia (Antakya, Turkey), moved to Spain in 963; scholar of Qur'anic studies, grammarian and arithmetician.
See: MAA (64), MAMS (II 151); Ibn al-Faraḍī [1] (I 261), al-Maqqarī [2] (II 120).

222. JA`FAR IBN AL-MUQTAFI

Abū'l-Faḍl Ja`far ibn al-Muqtafī (907-987), son of Caliph al-Muktafī (902-908) of Baghdad; philosopher, historian, mathematician and astrologer.
See: HD (328), HD² (216), KF (275, 279), KF² (30), MAA (64-65), MAMS (II 161-152), TH (155-156).
A1. [Book on Comets] - is mentioned in HD. In this book the transit of Venus across the disc of the Sun was described.

223. AHMAD AL-SAGHANI

Abu Ḥāmid Aḥmad ibn Muḥammad ibn Muḥammad al-Ṣāghānī al-Asṭurlābī (d. 990), was born in Saghanian (now Chaghanian in Uzbekistan); astronomer, worked in Baghdad.

See: GAL² (I 400), GAS (V 311, VI 217-218, VII 407), HD (329), HD² (216), IHS (I 666), MAA (65), MAMS (II 162-163), STMI (291), TH (79); Pingree [54] (EIr), Qurbani [1] (113-115), Rosenfeld [59] (ENWC), Tuqan [1] (261).

M1. Book on Perfect Projection [of a Sphere] onto a Plane (Kitāb fi'l-tasṭīḥ al-tāmm) = Properties of the Projection of a Sphere onto a Plane (Kayfiyyat tasṭīḥ al-kura) - Istanbul (TK 3342/4), 'Patna (2468/39). Description of the Istanbul manuscript: SHIM (464-465). Edition of the Patna manuscript: "al-Rasā'il al-Mutafarriqa" [1] (No 7). English translation: Lorch [11] (239-251). This treatise is briefly described in "Chronology" (No 348, E1) by al-Bīrūnī [2] (357-358) and also his detailed description is in "Astrolabes" (No 348, A5). Research: Karpova and Tagi-zade [1], Lorch [11], Tagi-zade [2]. Treatise in 12 chapters. "Perfect projection" of a sphere onto a plane is the projection from a point on the axis of the sphere, which does not coincide with a pole of the sphere, onto a plane orthogonal to the axis. This projection maps circles on the sphere to conics on the plane. Treatise contains theorems on the construction of conics and on projective transformations mapping circles to conics.

M2. Letter to the Great King `Aḍud al-Dawla ibn Abī `Alī Rukn al-Dawla on the Construction of a side of Equilateral Heptagon Inscribed in a Circle by Immobile Geometry (Risāla ilā al-mālik al-jalīl `Aḍud al-Dawla ibn Abī `Alī Rukn al-Dawla fī `amal ḍil` al-musabba` al-mutasāwī al-aḍlā` fi'l-dā'ira bi'l-handasa al-thābita) - Paris (4821/4).

M3. [Treatise on the Trisection of an Angle] - is quoted by al-Sijzī (No 296): Khayyām [1] (119).

A1. On Hours Made on Tympans of Astrolabes (Fī'l-sā`āt al-ma`mūla `alā ṣafā'iḥ al-asṭurlāb) - Oxford (I 940/3). Research: Frank [1], Hogendijk [40].

A2. Book on Distances and Volumes (Maqāla fi'l-ab`ād wa'l-ajrām) - Damascus (4871/12). Book in 3 chapters: 1) introduction, 2) on distances of planets and fixed stars from the center of the Earth, 3) on volumes of planets and stars.

A3. Book of Rules of the Science of Astronomy (Kitāb qawānīn `ilm al-hay`a) - is mentioned in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (69). The treatise contains a description of the results of measuring the inclination of an ecliptic by al-Saghānī in Baghdad.

224. AHMAD AL-KARABISI

Aḥmad ibn `Umar (or ibn Muḥammad) al-Karābīsī al-Hindī (10th c.), came from a family of dealers in flax (al-kirbās, pl. al-karābis), probably of Indian origin; geometer and arithmetician.

See: GAL (I 247) GAL² (I 390), GAS (V 277, VII 405), KF (282), KF² (38, 71), KZ (I 383, III 63, V 169), MAA (65-66), MAMS (II 163-164), SSM (38), STMI (388), TH (79); Brockelmann [11] (EI), [21] (IA), Kapp [1] (III 38), Tuqan [1] (211),

M1. Book of Measuring Rings (Kitāb misāḥat al-ḥalaq) - Berlin (quart. 1867), Cairo (Fāḍil riyāḍa 41/26), Istanbul (SM AS 2760/5, Beşir 440/15, Carullah 1502/11; TK 3456/16), Oxford (I 913/2a, 987/6), Tehran (Univ. 2432). Edition according to Oxford and Cairo manuscripts and German translation: Bessel-Hagen and Spies [1] (505-520). Research: Bessel-Hagen and Spies [1], Gandz [3]. Treatise in 2 books containing 18 and 7 propositions.

M2. Commentary on Introductions to the Books of Euclid (Sharḥ ṣudūr maqālāt Uqlīdis) - Patna (2034). Commentary on introductions to Euclid's "Elements".

M2a. Commentary on Euclid's "Elements" (Sharḥ Uṣūl Uqlīdis) - Rasht (C 81).

M3. Book on Hindu Reckoning (Kitāb al-ḥisāb al-hindī) - is mentioned in KF.

M4. Treatise on Inheritance (Risāla fi'l-waṣāya) - is mentioned in KF and KZ (V 169).

M5. Treatise on Reckoning Circulations (Risāla fī hisāb al-dawr) - is mentioned in KF and KZ (III 63).

225. YA`QUB AL-MISSISI

Abū Yūsuf Ya`qūb ibn Muḥammad al-Miṣṣīṣī (10th c.), reckoner.

See: GAS (V 297), KF (287), KF² (37, 71), MAA (66), MAMS (II 164), TH (378); Tuqan [1] (265).

M1. Book on Algebra and Almucabala (Kitāb al-jabr wa'l-muqābala) - is mentioned in KF.

M2. Book on Inheritance (Kitāb al-waṣāyā) - is mentioned in KF.

M3. Book of Duplication of Chess Squares (Kitāb taḍā`īf buyūt al-shaṭranj) - is mentioned in KF. Treatise of the summation of the series $1+2+2^2+...+2^{63}$.

M4. Complete Book (al-Kitāb al-jāmi`) - is mentioned in KF.

M5. Comprehensive Book (Kitāb jawāmi' al-jāmi') - is mentioned in KF.
M6. Book of Two Errors (Kitāb al-khaṭa'ayn) - is mentioned in KF. Treatise on the rule of double false position.
M7. Book on Reckoning of Circulations (Kitāb ḥisāb al-dawr) - is mentioned in TH.
M8. Book on Sexagesimal Ratios (Kitāb nisbat al-sittīn) - is mentioned in TH.

226. IKHWAN AL-SAFA

Ikhwān al-Ṣafā' wa Khillān al-Wafā' (10th c.); (Brethren of Purity and Comrades of Faithfulness), member of a group of scholars headed by Abū Sulaymān Muḥammad ibn Mush`ir al-Bustī al-Muqaddasī, Abū'l-Ḥasan `Alī ibn Hārūn al-Zanjānī, Muḥammad ibn Aḥmad al-Nah-rajūrī, Abū'l-Ḥasan al-`Aufī and Zayd ibn Rifā`a, also known as "Basra Brethren". He worked in Basra, Baghdad, Nishapur, and Samarkand. Their collective pseudonym was borrowed from the Arabic translation of Indian epos "Qalila and Dimna", see Goldziher [1].

See: AGL (229-232), GAL (I 236-238), GAL² (I 379-381), GAS (III 379-380, IV 346, V 348-352, VI 234-239, VII 284-287, IX 236, X), HMA (II 393-398), IHS (I 660-661), KZ (III 460), MAMS (II 164-167), PI (II 379-382, IV 102-115, 362), PL (II 350-351), SSM (44-45), STMI (604-605), TH (82); Awa [1], `Abd al-Nur [1], al-Bayhaqī [1] (142), de Boer [3] (76-89), [6] (EI), De Young [9] (ENWC), Farmer [4] (33-34), Farrukh [3], Flügel [2], Ignatenko [7] (99-126), Lane-Poole [3], Marquet [1] (EI²), [2], [3] (DSB), [4], Mieli [2] (129-130), Mrozek [1], Nasr [1, 11a], Stern [3], Tibawi [1-2], Ueberweg [1] (322-323), Ülken [4] (86-90), Zakuyev [10].

E1. Treatises of Brethren of Purity and Comrades of Faithfulness (Rasā'il Ikhwān al-Ṣafā' wa Khillān al-Wafā') - Berlin (5035-5042), Cairo (Ṭal`at hikma 383), Calcutta (Buhar 337), Cambridge (Browne 139/15), Escorial (II 900, 928, 942/2), Gotha (157), Hyderabad (Salar falsafa 41-42), Istanbul (Atıf 1681; Millet, Feyzullah 2130; NO 2683; Ragıp 839; SM Esat 3637, Carullah 982, Yeni Cami 1199), Jerusalem (16), Kabul (Muza 14), Kayseri (Reşit 865), Konya (990), Lucknow (45583), London (6692, Sup. 708-10; Ind. 474), Manchester (3787), Milan (349), Mosul (26, 169), Paris (2303/9), Patna (2222), Princeton (1129), Yehuda 4263), Rampur (3-5), St. Petersburg (B 897-899, 1234, C 715), Tashkent (3887), Vienna (1).
Persian translation: London (8372), Edition by Dieterici: Ikhwān al-Ṣafā' [3], other editions: Ikhwān al-Ṣafā' [4-6]. Research: Awa [1], Bausani [2-5], Flügel [2], Massignon [1], Pines [30], Tibawi [1]. 52 treatises divided to 4 parts: 1) Mathematics and Logic in 14 treatises, 2) Natural Sciences in 17 treatises, 3) Philosophy and Psychology in 10 treatises, 4) Divine laws on religion and sorcery in 11 treatises.

M1. On Numbers (Fī'l-`adad) - 1st treatise of I part of E1 - Separate manuscripts: Cairo (mīqāt 122/3, riyad. 301/1 - anonymous). Persian translation by Ibn al-Hasan: Tbilisi (54/89). German translation: Dieterici [4] (1-22). Research: S. Brentjes [1-2], Cantor [2] (738-741), Dieterici [2], Goldstein [2]. Treatise on arithmetic and number theory including geometric algebra and philosophy and mystic of numbers.

M2. Geometria on Geometry and Its Essence (al-Jumāṭriyā fī'l-handasa wa māhiyātihā) - 2nd treatise of the part I of E1 - Persian translation by Ibn al-Hasan: Tbilisi (54/89). German translation: Dieterici [4] (28-45). Research: Baffioni [2], Cantor [2] (738-741), Goldstein [2], Dieterici [2-3], Tleuberdiyev [1-4]. In this treatise two kinds of geometry are considered: "sensual (ḥissiyya) geometry", that is, atomistic geometry, and "mental (`aqliyya) geometry", that is, geometry of Euclid; treatise includes the chapter on magic squares.

M3. On Proportions (Fī'l-tanāsubāt) - 6th treatise of I part of E1. German translation: Dieterici [4] (154-168).

A1. Astronomia on the Science of Stars and Construction of Celestial Spheres (al-Asṭrūnūmiyyā fī `ilm al-nujūm wa tarkīb al-aflāk) - 3rd treatise of part I of E1 - Separate manuscript: Cairo (Fāḍil mīqāt 166/1). German translation: Dieterici [4] (46-86). Research: Casanova [1].

A2. Treatise on the Astrolabe (Risālat al-asṭurlāb) - St. Petersburg (B 1029). does not enter in E1.

G1. On Geography (Fī'l-jughrāfiyyā) - 4th treatise of I part of E1. German translation: Dieterici [4] (86-93).

Ph1. Physics (al-Ṭabī`iyyāt) - treatises of the II part of EI. German translations of the treatises on natural sciences: Dieterici [1], of the anthropological treatises: Dieterici [6], of the treatises on "world soul": Dieterici [7]. Russian translation by Starkova of some treatises on natural sciences: Ikhwān al-Ṣafā' [7]. German and English translations of a fable on a dispute between men and animals by Dieterici and Platts, which is a part of the 21st treatise: Ikhwān al-Ṣafā' [1-2]. In these treatises physics, biology, human body, and "man as a small world" (microcosmos) are considered.

Mu1. On Music (Fī'l-mūsīqā) - 5th treatise of I part of E1. German translation: Dieterici [4] (100-153). Edition, French translation, and research: Shiloah [3]. Russian translation by Saghadeyev: Ikhwān al-Ṣafā' [8].

PH1. Treatises on Logic - 7-14th treatises of E1. German translations: Dieterici [5]. Research: Aghayev [1-5], Diwald [1], Mrozek [1], Zakuyev [9]. In these treatises classification of sciences according to Aristotle and al-Fārābī (No 180), "Introduction" (īsāghūjī) of Porphyry, 10 Aristotle's categories (qaṭighūriyās), Aristotle's

"Interpretation" (Bāramaniyās), Aristotle's "First Analytic" (al-Anūlūṭiqā al-ūlā) and "Second Analytic" (al-Anūlūṭiqā al-akhīra) are considered.

PH2. Philosophical and Psychological treatises - treatises of the III part of EI. German translations: Dieterici [5]. Research: Aghayev [1-5], Diwald [1], Mrozek [1], Zakuyev [9]. Edition and French translation of the treatise on revolutions and cycles by Godefroid: Ikhwān al-Ṣafā' [9].

PHMy1. Theological and Mystical Treatises - treatises of the IV part of EI.

227. MUHAMMAD AL-SARAKHSI

Muḥammad ibn Isḥāq ibn Ustādh Bundād al-Sarakhsī (9-10th c.), from Sarakhs, Khurasan (now in Turkmenistan); astronomer and mathematician.

See: GAS (V 282, VI 232), MAMS (II 167); Nallino [4] (175-176).

A1. Zīj (al-Zīj) - is quoted by al-Bīrūnī in "Geodesy' (No 348, G3) al-Bīrūnī [31] (170-171), in "India" (No 348, E2) al-Bīrūnī [4] (II 15-18), in "Mas'udic Canon" (No 348, A1) al-Bīrūnī [14] (632, 940), and in "Transits" (No 348, A16) al-Bīrūnī [12] (Nos 3, 23, 31, 54).

228. `ALI AL-MISSISI

Abū'l-Ḥasan `Alī al-Miṣṣīṣī, astronomer and astrologer, probably son of al-Muqaddasī (No 215).

See: KF (278), KF² (34), MAA (66), MAMS (II 167).

A1. Book on Conjunctions (Kitāb al-qirānāt) - is mentioned in KF.

229. YA`QUB AL-RAZI

Abū Yūsuf Ya`qūb ibn Muḥammad al-Rāzī (10th c.), from Rayy, mathematician.

See: GAS (V 300), KF (281), KF² (17, 37, 71), KZ (I 382), MAA (66, 212), MAMS (II 167-168), TH (281); Kapp [1] (II 96), Tuqan [1] (264).

KF mentions his following mathematical treatises:

M1. Complete Book on Arithmetic (al-Kitāb al-jāmi` fī'l-ḥisāb).

M2. Book on [Reckoning] Board (Kitāb al-takht).

M3. Book on Calculus of Two Errors (Kitāb ḥisāb al-khaṭa'ayn). Treatise on the rule of double false position.

M4. Book of Thirty Wonderful Problems (Kitāb al-thalāthīn mas'ala al-gharība).

M5. Commentary on the Tenth Book of the Work of Euclid (Tafsīr al-maqāla al-`āshira li kitāb Uqlīdis). Commentary on Book X of "Elements".

230. MUHAMMAD IBN LURRA

Muḥammad ibn Lurra (10th c.), from Isfahan, mathematician.

See: GAS (V 297), KF (282), KF² (38), MAA (66), MAA² (166), MAMS (II 168), TH (287); Tuqan [1] (267).

M1. Complete Book on Arithmetic (al-Kitāb al-jāmi` fī'l-ḥisāb) - is mentioned in KF.

231. SINAN IBN AL-FATH

Sinān ibn al-Fatḥ (10th c.), from Sabians, born in Harran (Turkey), mathematician.

See: GAS (V 301, VI 207, VII 406), KF (281), KF² (37, 70-71), MAA (66-67), MAMS (II 168), SSM (39), TH (190); Chwolsohn (I 621-622), Tuqan [1] (178-181).

M1. Book on the Cube and the Square, and Proportional Numbers (Kitāb al-ka`b wa'l-māl wa'l-a`dād al-mutanāsiba) - Cairo (riyad. 260/4). Description of the manuscript: Tuqan [1] (178-181). Research: Atik [1], Rashed [22] (106), [23]. The treatise contains a unique case of multiplicative names of powers (x^6 = māl al-ka`b, x^5 = madād) in Islamic mathematics.

KF mentions his following mathematical works:

M2. Book of Board on Hindu Reckoning (Kitāb al-takht fī'l-ḥisāb al-Hind).

M3. Book on Reunion and Seperation (Kitāb al-jam` wa'l-tafrīq).

M4. Commentary on [the Book] on Addition and Substraction (Sharḥ al-jam` wa'l-tafrīq). Commentary on M3.

M5. Book of Commentary on Algebra and Almucabala of al-Khwārizmī (Kitāb sharḥ al-jabr wa'l-muqābala li'l-Khwārizmī). Commentary on the work (No 41, M3) of al-Khwārizmī.

M6. Book on Inheritance (Kitāb al-waṣāyā).

M7. Book of Calculus of Cubes (Kitāb ḥisāb al-muka``abāt).

Sinān ibn al-Fatḥ was probably the author of the following mathematical works:

M8. Arc (al-Qaws) - Cairo (riyāḍa 260/5 - anonymous).

M9. Rarities of Measurement (Nawādir al-misāḥa) - Cairo (riyāḍa 260/6 - anonymous).

Ph1. Reasoning on Optical Measurements (Qawl fī masāḥāt al-manāẓiriyya) - Cairo (riyāḍa 260/3). This treatise probably coincides with a treatise quoted in "Shadows" (No 348, A4) by al-Bīrūnī [47] (I 267) where the fragment on measuring the distance of the Moon from the Earth is given.

232. AHMAD AL-UQLIDISI

Abū'l-Ḥasan Aḥmad ibn Ibrāhīm al-Uqlīdisī (10th c.) (al-Uqlīdisī = copyist), copied "Elements" of Euclid).

See: GAL² (I 387), GAS (VII 405), MAMS (II 168-170); Sa`idan [18] (DSB), Sesiano [30] (ENWC).

M1. Book of Sections on Hindu Arithmetic (Kitāb al-fuṣūl fī'l-ḥisāb al-hindī) - Istanbul (SM Yeni Cami 802).

Description of the manuscript: SHIM (513). Edition by Sa`idan: al-Uqlīdisī [1], Sa`idan [13]. English translation of the contents and the chapter on decimal fractions: Sa`idan [2], The complete English translation: Sa`idan [19]. Research: Anbuba [9], Berggren [10] (36-39), Sa`idan [6, 19], Tllashev and Umarov [1] (decimal fractions).

Treatise in 4 parts: 1) 21 chapters on arithmetic of integers and of simple and sexagesimal fractions, 2) 20 chapters on arithmetic of integers and fractions on a higher level, here decimal fractions are introduced, 3) 21 chapters on proofs of rules of the first two parts, 4) 32 chapters on replacing calculations on a board covered by dust by reckoning on paper. The treatise was written in 952.

233. `UTARID

`Uṭārid ibn Muḥammad al-Ḥāsib (10th c,), reckoner (al-ḥāsib) and astrologer (`Uṭārid = the planet Mercury). Al-Bīrūnī in "Astrolabes" (No 348, A5) mentions that `Utarid was one of constructors of the disc of eclipses; see Wiedemann [142] (13).

See: GAS (V 254, VI 162), KF (278), KF² (33, 36), KZ (IV 113), MAA (67), MAA² (166), MAMS (II 170-171).

A1. Book of Celestial Spheres (Kitāb al-aflāk) - is mentioned in KF.

A2. Book on Operations with the Astrolabe (Kitāb al-`amal bi'l-asṭurlāb) - is mentioned in KF.

A3. Book on the Use of Armillary Sphere (Kitāb al-`amal bi-dhāt al-ḥalaq) - is mentioned in KF.

A4. Book on Fixed Stars (Kitāb al-kawākib al-thābita) - is mentioned in KZ, was critized by al-Ṣūfī in (No 212, A1).

A5. Sufficient Zīj (al-Zīj al-kāfī) - is mentioned in "Transits" (No 348, A16) by al-Bīrūnī [17] (85).

A6. On the Craft of Astronomers (Fī miḥnat al-munajjimīn - is mentioned in "Cartography" (No 348, M5) by al-Bīrūnī, see Suter [47] (81).

Ph1. Book on the Construction of Burning Mirrors (Kitāb `amal al-marāyā al-muḥrika) - Istanbul (SM Laleli 2759/1). Description of the manuscript: SHIM (465-466).

Mi1. Book on the Use of Stones (Kitāb manāfi` al-aḥjār) - is quoted in "Mineralogy" (No 348, Mi1) by al-Bīrūnī [22] (87, 204).

234. HAYYUN IBN AL-SALT AL-KATIB

Abū Zakarīyā Ḥayyūn (or Ḥannūn) ibn `Amr ibn Yūḥannā ibn al-Ṣalt al-Kātib (9-10th c.), Christian physician, astronomer, astrologer, and iatro-astronomer.

See: GAS (III 269-270, VII 155-156), KF (280), MAA (67), MAMS (II 171); Klein-Franke [2], Troupeau [1].

A1. Iatro-astronomical Compendium (al-Kunnāsh al-ṭibbī al-nujūmī) - Istanbul (TK 1995/1).

A2. Book of Proof of the Reliability of Stars and their Predictions (Kitāb al-iḥtijāj fī ṣiḥḥat al-nujūm wa'l-aḥkām fīhā) - is mentioned in KF.

235. JA`FAR MAWAZAJI

Ja`far ibn Muḥammad ibn Ḥarīr `Umar Mawazajī (10th c.), constructor of astronomical instruments, collaborated with al-Sijzī (No 296).
See: MAMS (II 171).
Al-Bīrūnī in "Astrolabes" (No 348, A5) wrote that Mawazajī was the inventor of the boat-shaped astrolabe.

236. `ABDALLAH AL-SAYDANANI

`Abdallāh ibn al-Ḥasan al-Ṣaydanānī (10th c.), reckoner and astronomer.
See: GAS (V 301), KF (280), KF² (36, 68), MAA (67), MAMS (II 171-172); Tuqan [1] (266).
KF mentions his mathematical works:
M1. Commentary on the Book of Muḥammad ibn Mūsā al-Khwārizmī on Algebra (Sharḥ kitāb Muḥammad ibn Mūsā al-Khwārizmī fi'l-jabr). Commentary on the treatise (No 41, M3) of al-Khwārizmī.
M2. Commentary on the Book on Reunion and Seperation (Sharḥ kitāb fī'l-jam` wa'l-tafrīq) - probably, commentary on treatise (No 41, M2) of al-Khwārizmī.
M3. Book on Kinds of Multiplication and Division (Kitāb ṣunūf al-ḍarb wa'l-qisma).

237. ABU'L-FADL AL-HAYYANI

Abu'l-Faḍl al-Ḥayyānī (or al-Janābī) (10th c.), mathematician and astronomer.
See: GAS (V 302), KF (280), KF² (36), MAA (67), MAMS (II 172).
A1. Geometric Zīj (al-Zīj al-handasī) - is mentioned in KF.

238. AL-`ABBAS IBN AL-RABI`

Abū'l-Rabī` al-`Abbās ibn Baghān ibn al-Rabī` (10th c.), astronomer and geographer.
See: GAS (VI 177, X), KF (280), KF² (36), MAA (67), MAMS (II 172).
AG1. Book on Division of the Inhabited [Domain of] the Earth and Form of the World (Kitāb qismat ma`mūr al-arḍ wa hay`at al-dunyā) - is mentioned in KF.

239. MUHAMMAD AL-SHATAWI

Abū `Abdallāh Muḥammad ibn al-Ḥasan ibn Abī Hishām al-Shaṭawī (10th c.), astronomer and mechanician.
See: GAS (VI 205), KF (281), KF² (36), KZ (V 78-79), MAA (67), MAMS (II 172).
KF mentions his astronomical and mechanical works:
A1. Book on the Construction of Inclined Sundials (Kitāb `amal al-rukhāma al-munḥarifa).
A2. Book on the Construction of drum-shaped Sundials (Kitāb `amal al-rukhāma al-muṭabbala).
A3. Construction of [Horary Instrument with] Pebbles (Ṣan`at al-banāḍiq).
A4. Construction of Altitudes and Azimuths (`Amal al-irtifā` wa'l-sumūt).
Me1. Book of Mechanics (Kitāb al-ḥiyal).

240. JA`FAR AL-MAKKI

Ja`far ibn `Alī ibn Muḥammad al-Makkī (10th c.), from Mecca, mathematician.
See: GAS (V 302), KF (282), KF² (38), MAA (68), MAMS (II 172-173); Tuqan [1] (267).
M1. Book on Geometry (Kitāb fī'l-handasa) - is mentioned in KF.
M2. Treatise on the Cube (Risāla fī'l-muka``ab) - is mentioned in KF. Probably it is a treatise on the extraction of cube roots.

241. IBN RAWH

Ibn Rawḥ (or Abū Rawḥ) (10th c.), Sabian; translator. Translated Alexander of Aphrodisias' commentary on Aristotle's "Physics" into Arabic.
See: KF (250, 282), KF² (8, 38), MAA (68), MAMS (II 173), TH (38).

242. MUHAMMAD IBN NAJIYA

Muḥammad ibn Nājiya al-Kātib (10th c.), official and mathematician.
See: GAS (V 302), KF (281), KF² (36), MAA (68), MAMS (II 173), TH (287); Tuqan [1] (268).
M1. Book on Measurement (Kitāb fi'l-misāḥa) - is mentioned in KF.

243. NAZIF IBN YUMN

Naẓīf ibn Yumn (or Yaman) al-Mutaṭabbib al-Qaṣṣ al-Yūnānī (d. ca 990), of Greek (al-yūnānī) origin, Christian priest (al-qaṣṣ), physician (al-mutaṭabbib), translator of Greek works, in particular Euclid's "Elements" into Arabic, participated in astronomical observations. In "Geodesy" (No 348, G3) al-Bīrūnī [31] (68-70) mentions his observations made in Shiraz in 969 and in Baghdad in 988. He corresponded with al-Sijzī (No 296) and al-Bīrūnī (No 348).
See: GAL (I 245), GAL² (I 387), GAS (V 313-314, VII 407), HD (326), HD² (215), IHS (I 664), KF (266), KF² (16-17), MAA (68), MAMS (II 173-174), UA (I 238); Kapp [1] (III 68-69), Meyerhof [3] (424).
M1. Naẓīf ibn Yumn al-Mutaṭabbib's Translations of the Supplements of the Propositions of the Tenth Book [of Euclid's "Elements"] from Greek. (Mā naqala Naẓīf ibn Yumn al-Mutaṭabbib mimmā wujida fi'l-yūnānī min ziyāda fī ashkāl al-maqāla al-`āshira) - Paris (2457/18, 34). Description of the manuscript: Woepcke [8]. Russian translation: Matviyevskaya [20] (10-12). Research: Matviyevskaya [5] (194-195), [20] (7-9, 12). Propositions X1 and X6 and a corollary for proposition X9 of Euclid's "Elements" are discussed.

244. MUHAMMAD IBN ZARB

Abū Bakr Muḥammad ibn Yabqa ibn Muḥammad ibn Zarb (d. 991), judge in Cordoba, arithmetician.
See: MAA(68), MAMS (II 174); Ibn al-Faraḍī [1] (I 387).

245. SALIH AL-QASSAM

Abu'l-Qāsim Ṣāliḥ ibn `Abdallāh al-Umawī al-Qassām (10th c.), (qassām = divisor); arithmetician, also knowledgeable in inheritance.
See: MAA (68-69), MAMS (II 174); Ibn Bashkuwāl [1] (I 233).

246. MUHAMMAD AL-`ADHRI

Muḥammad ibn `Abdūn al-Jabalī al-`Adhrī (10th c.) from `Adhra, Spain (now Adra near Almeria); physician, worked in Cordoba; travelled in the East in 958-971. On his return, he became the physician of Caliphs al-Ḥakam II (961-976) and Hishām II (976-1009) in Cordoba. He knew logic and mathematics well.
See: GAS (V 308), MAA (69), MAMS (II 174), UA (II 46); Ibn al-Abbār [1] (I 102), al-Maqqarī [2] (I 393, 437).
M1. Concise [Book] on Measurement (Mukhtaṣar fi'l-misāḥa) - Paris (5311).
M2. Book on Area [of Figures] (Kitāb al-Taksīr) - is mentioned in UA.

247. ABU MUHAMMAD AL-SAYFI

Abū Muḥammad al-Sayfī (10th c.), astronomer.
See: GAS (VI 233), MAMS (II 175).
A1. Short Zīj (al-Zīj al-mukhtaṣar) - is mentioned in "Transits" (No 348, A16) by al-Bīrūnī [12] (Nos 3, 5-6, 23).
A2. [Treatise on the Construction of Circles of Azimuths (dawā'ir al-sumūt)] - is mentioned in "Astrolabes" (No 348, A5) by al-Bīrūnī, see Suter and Wiedemann [1] (85).

248. ABU'L-`ABBAS AL-AMULI

Abu'l-`Abbās al-Āmulī (10th c.), astronomer.
See: GAS (VI 241), MAMS (II 175).
A1. Book of Indications of the Qibla (Kitāb dalā'il al-Qibla) - is mentioned in "Chronology" (No 348, E1) by al-Bīrūnī [15] (64, 272).

249. `ARIB AL-QURTUBI

`Arīb ibn Sa`d al-Kātib al-Qurṭubī (d. 976), historian, physician, and astronomer, worked in Cordoba.

See: GAS (I 327, III 302, VII 355-356), IHS (I 680); Dozy [1], Lopez [1].

A1. Book on Anwa' (Kitāb al-anwā'). Edition of the Medieval Latin translation together with the treatise (No 250, A1) of Rabī` al-Usquf [1] by Dozy. Re-edition of this edition with French translation by Pellat: Rabī` al-Usquf [3]. Edition of Latin translation: Libri [1] (I 389-452). Spanish translation by Simonet: Rabī` al-Usquf [2].

H1. Continuation of the History of al-Ṭabarī (Ṣilat ta'rīkh al-Ṭabarī) - continuation of the chronological work of al-Ṭabarī [1]. Edition by de Goeje: al-Qurṭubī [1].

250. RABI` AL-USQUF

Rabī` ibn Zayd al-Usquf (10th c.) from Cordoba, Christian bishop (al-usquf) under Caliph al-Ḥakam II; known in medieval Europe as "Harib Filius Zeidi Episcopus"; author of many astrological works.

See: IHS (I 669), MAA (69-70), MAMS (II 175-176); Dozy [1], al-Maqqarī [1] (II 318).

A1. Book on Anwā' (Kitāb al-anwā'). Edition by Dozy of Medieval Latin translation Rabī` al-Usquf [1], Re-edition of this edition with French translation by Pellat: Rabī` al-Usquf [3]. Edition of the Latin translation: Libri [1] (I 389-452). Spanish translation by Simonet: Rabī` al-Usquf [2]. Research: Viladrich [7].

A2. Book of Division of Time and Benefits of Bodies (Kitāb tafṣīl al-zamān wa maṣāliḥ al-abdān) - is mentioned by al-Maqqarī. Treatise on principles of astronomy and astrology.

251. IBRAHIM IBN HILAL

Abū Isḥāq Ibrāhīm ibn Hilāl ibn Ibrāhīm ibn Zahrūn al-Ṣābi' al-Ḥarrānī (925-994), from Sabians, great grandson of (No 103), grandson (daughter's son) of (No 169), worked in Baghdad under Caliph al-Muṭī` (946-974) and Buyid Sultans Mu`izz al-Dawla (945-967) and `Izz al-Dawla (967-978); historian, poet, astronomer, and mathematician.

See: GAS (V 314, 320), HD (330), HD2 (217), IHS (I 659), KWA (I 12), KWA2 (I 31), KZ (I 191-192, II 94, 109), MAA (70), MAMS (II 176, III 363), SSM (40), TH (75-76); Abu'l-Fida [1] (II 583), Chwolsohn [1] (I 588-604), Tuqan [1] (256).

M1. [Commentary on Euclid's "Elements"] - Istanbul (SM AS 2741).

A1. [Revision of] the Book by Thābit ibn Qurra on Horary Instruments Called Sundials (Kitāb Abū'l-Ḥasan Thābit ibn Qurra fī ālāt al-sā`āt allatī tusammā rukhāmāt) - Istanbul (Köprülü 948/1). Edition and German translation by Garbers: Ibn Qurra [2]. Revision of the work (No 103, A4) of Ibn Qurra containing an appendix.

Me1. Letter to Abū Sahl al-Kūhī (Risāla ilā Abī Sahl al-Kūhī) - Cairo (Fāḍil riyāḍa 40/21a), Damascus (5648), Istanbul (SM AS 4832/23). Letter to al-Kūhī (No 277).

Me2. Letter of al-Ṣābī' to Abū Sahl al-Kūhī where his Opinion is asked in Connection with Doubts that Appeared about what he Discovered (Risāla al-Ṣābī' ilā Abī Sahl al-Kūhī yas`aluhū al-naẓar fī shukūk `araḍat lahu fī mā istakhrajahū) - Cairo (Fāḍil riyāḍa 40/21b), Damascus (5648), Istanbul (SM AS 4832/25). The answer of al-Kūhī (No 277, M22) on letters Me1-Me2 shows that subject of these letters was geometric propositions on centers of gravity. Research: Berggren [7], Sesiano [5].

252. JABIR IBN IBRAHIM AL-SABI`

Abū Sa`īd Jābir ibn Ibrāhīm al-Ṣābī (10th c.), son of Ibrāhīm ibn Hilāl (No 251).

See: GAL (I 245), GAL2 (386), GAS (V 254, VI 240, VII 404), IHS (I 602), MAA (69), MAMS (II 174-175), SSM (34).

M1. Book on Explanation of the Proof of Calculus of Two Errors (Kitāb iḍāḥ al-burhān `alā ḥisāb al-khaṭa'ayn) - Cairo (riyāḍa 898/4), Leiden (14/3), New York (Columb. 30/10), Oxford (I 937/39). German translation of the Leiden manuscript: Suter [17] (23-27). Research: Suter [18]. Commentary on the work (No 118, M1) of Qusṭā ibn Lūqā.

A1. Poem on Ascensions of Lunar Stations (Qaṣīda fī ṭulū` al-manāzil) - Gotha (1378/2).

A2. Book on Three Spheres of Mercury (Maqāla fī thalāthat aflāk `Uṭārid) - Oxford (I 940/10).

253. AL-MUHASSIN IBN IBRAHIM AL-SABI'

Abū `Alī al-Muḥassin ibn Ibrāhīm al-Ṣābi' (10th c.), another son of Ibrāhīm ibn Hilāl (No 251) and brother of Ibn Ibrāhīm al-Ṣābī (No 252). Historian, father and grandfather of historians Hilāl ibn al-Muḥassin al-Ṣābi' (970-1036) and Muḥammad ibn Hilāl; known as "Ghars al-Ni`ma" (d. 1087), who carried on with the supplement of historical treatises of al-Ṭabarī [1] and Thābit ibn Sinān (No 197). The first was the author of a treatise on customs at the court of caliphs (H. al-Ṣābi' [1]).

See: TH (116-122).

HS1. Finally Established List of what Abū'l-Ḥasan Thābit ibn Qurra al-Ṣābi' al-Ḥarrānī Composed, Translated, and Improved (Thabt mā ṣannafa Abū'l-Ḥasan Thābit ibn Qurra al-Ṣābi' al-Ḥarrānī wa <mā> naqalahū wa aṣlaḥahū). Edition: al-Ṣabī' [1] = TH (116-122).

254. MUHAMMAD AL-IFRIQI

Muḥammad ibn `Abdallāh ibn Muḥammad al-`Utaqī al-Ifrīqī (d. 995), from Tunis (Ifriqiyya, North Africa), worked in Cairo, historian and astrologer, author of books on the history of Umayyad and Abbasid caliphs and many astrological works.

See: MAA (70-71), MAMS (II 176-177), TH (285).

255. ABU `ABDALLAH IBN AL-BALANSI

Abū `Abdallāh ibn al-Balansī or al-Qalānisī (d. 996); his father was born in Valencia. He worked in Cairo under Fatimid Caliph al-`Azīz (975-996), astrologer.

See: MAA (71), MAMS (II 177), TH (410).

256. ABU 'L-WAFA AL-BUZJANI

Abū'l-Wafā Muḥammad ibn Muḥammad ibn Yaḥyā ibn Ismā`īl ibn al-`Abbās al-Būzjānī (940-998), from Buzjan, Khurasan; he worked in Baghdad from 959 on. He was the pupil of Ibn Qurra (No 103) and Abū'l-`Alā al-Karnīb (No 154), and the teacher of Ibn `Irāq (No 299). In 997 he observed a lunar eclipse in Baghdad simultanously with Ibn `Irāq's pupil al-Bīrūnī (No 348) who observed this eclipse in Khwārizm (see: al-Bīrūnī [31], 214-215). Al-Bīrūnī [31] (69, 270) mentions his other observations in "Geodesy" (No 348, G3).

See: GAL (I 255), GAL² (I 400), GAS (V 321-325, 403, VI 222-224, VII 408-409), HD (338), HD² (222), IHS (I 666-667), KF (266, 283), KF² (17, 39-40, 73), KWA (II 81), KWA² (III 320), KZ (I 382, III 565, V 172), MA (27-32, 106-112, 147-148), MAA (71-72), MAMS (II 177-181, III 363), PL (II 2-3), SSM (41-42), STMI (286), TH (287-289); Abu'l-Fida [1] (II 598), al-Bayhaqī [1] (154-155), [5] (59-60), Berggren (90-96, 135-136, 175-176), Chawushi [4], Delambre [1] (156-170), Dold-Samplonius [18] (ENWC), Farmer [4] (33), Kapp [1] (III 70-73), Kubesov [21], Matviyevskaya and Tllashev [6] (60-63), Neuenschwander [2] (LM), Pingree [51] (EIr), Qurbani [1] (120-157), Sayılı [18] (109-112), Tuqan [1] (227-236), Wiedemann [3], Woepcke [10] (243-256), Yushkevich [12] (DSB).

M1. Memorable Introduction to the Art of Arithmetic (al-Madkhal al-ḥifẓī ilā ṣinā`at al-arithmāṭīqā) = Treatise of Arithmetic (Risālat al-a[ri]thmāṭīqā) - Rampur (I 414 - under the first title), Tashkent (4750 - under the second title). Description of the manuscript: Matviyevskaya [3]. Edition: Abū'l-Wafā' [2]. Russian translation: Matviyevskaya [9] (81-83). Research: Matviyevskaya [9] (76-81, 84-87), Matviyevskaya and Tllashev [6] (61-66). Principles of theoretical arithmetic, near Nicomachus' "Introduction to Arithmetic", apparently, coincides with "Introduction to the Art of Numbers" mentioned in M2.

M2. A Book about What is Necessary for Scribes, Dealers, and Others from the Science of Arithmetic (Kitāb fīmā yaḥtāju ilayhi al-kuttāb wa'l-`ummāl wa ghayruhum min `ilm al-ḥisāb) = Book of Stations on Arithmetic (Kitāb al-manāzil fī'l-ḥisāb) = Book of Seven Stations (Kitāb al-manāzil al-sab`) - Cairo (riyāḍa 42/1 - under the third title), Dublin (Beatty 5208 - under the first title), Leiden (103 - first 3 "stations"- under the first title), Escorial (I 933 - under the second title). Edition: Sa`idan [10]. Russian translation of the fragment on the use of negative numbers: Medovoy [1] (595-596). French translation of the contents: Woepcke [7] (246-251). Research: Ehrenkreuz [1-2], Luckey [8] (29-31, 83-85), Matviyevskaya and Tllashev [6] (80-82), Medovoy [2-4], Sa`idan [15], Woepcke [12] (53-55). Textbook of practical arithmetic, dedicated to Buyid Amir `Aḍud al-Dawla, in 7 "stations" (manāzil): 1) on ratios and fractions, 2) on multiplication and division, 3) on

measurement. 4) on levy of taxes, 5) on changes, 6) on book-keeping, 7) on trade deals. In (2) negative numbers are used: "debt (dayn) 2 by 10 is equal to debt 20".

M3. Book about what is needed by the Artisan for Geometric Constructions (Kitāb fīmā yaḥtāju ilayhi al-ṣāni` min al-a`māl al-handasiyya) = Book of Joinery on Constructions by Ruler, Compass and Angle (Kitāb al-najāra fī `amal al-masṭara wa'l-birkār wa'l-kunyā) - Cairo (falak 6965, 8890, riyāḍa 260/1, 366 - incomplete, anonymous; `ulūm. 31024, riyāḍa 44795), Istanbul (SM AS 2753, from Samarkand library of Ulugh Beg, No 816), Mashhad (5357), Milan (68 - incomplete); the Cairo manuscripts are under the second title, all the others are under the first title. Persian revision: Paris (772/22). German translation of the Milan manuscript: Suter [36]. Russian translation of the Istanbul manuscript by Krasnova: Abū'l-Wafā' [1]. Facsimile of Persian revisions: Qurbani [1] (149-157). French translation of a Persian revision: Woepcke [8] (319-359). Research: Bulatov [2], Krasnova [2-4]. Textbook of constructive geometry, dedicated to Buyid Amīr Bahā' al-Dawla Fīrūz (989-1012) in 11 chapters: 1) on constructions by ruler, compass, and angle, 2) on principles; the text from the problem 11 coincides with Book I of the geometric treatise of al-Fārābī (No 180, M2). Chapters 3-11 also coincide with Books II-X of this treatise of al-Fārābī, to which propositions 11-21 of the chapter 11 (on construction of spherical honeycombs equivalent to construction of semiregular polyhedra inscribed into a sphere) are added.

M4. Treatise on the Composition of Number of Magic Square in Squares (Risāla fī tarkīb `adad al-wafq fi'l-murabba`āt) - Istanbul (SM AS 4843/3). Research: Sesiano [31]. Edition, French translation and research: Sesiano [32]

M5. Answer on a Question Proposed to him by the Jurist Abū `Alī al-Ḥasan ibn al-Ḥārith on Measurement of Triangles without finding the Height and Place of a Falling Stone (Jawāb `ammā sa'alahu al-faqīh Abū `Alī al-Ḥasan ibn al-Ḥārith fī misāḥat al-muthallathāt min ghayr istikhrāj al-`amūd wa masqaṭ al-ḥajar) - Damascus (4871/15), Oxford (I 143/3, 987/5).

M6. The Problem of Archimedes on Measuring a Triangle (Mas'alat Arshimīdis fī misāḥat al-muthallath) - Oxford (I 143/6, 987/8).

M7. Treatise on Ratios and Definitions (Risāla fi'l-nisab wa'l-ta`rīfāt) - Tehran (9602, Naraki). Research: Kennedy and Mawaldi [1].

M8. Treatise on Sums of the Sides of Squares and Edges of Cubes and Taking Their Differences (Risāla fī jam` aḍlā` al-murabba`āt wa'l-muka``abāt wa akhdh tafāḍulihā) - Mashhad (5521/1).

TH (see also Woepcke [7], 251-254) mentions following mathematical works of Abū'l-Wafā':

M9. Book on the Determination of the Edge of a Cube, Square of Square and what they Consists of (Kitāb istikhrāj ḍil` al-muka``ab wa māl al-māl wa mā yatarakkabu minhumā). Since "square of square" (māl al-màl) is (x^4), apparently, the treatise is devoted to the extraction of roots of third, fourth, and some higher powers.

M10. Book of the Commentary on the Book of al-Khwārizmī on Algebra and Almucabala (Kitāb tafsīr kitāb al-Khwārizmī fi'l-jabr wa'l-muqābala). Commentary on the work (No 41, M3) of al-Khwārizmī.

M11. Book of the Commentary on the Book of Diophantus on Algebra (Kitāb tafsīr kitāb Diyūfanṭus fi'l-jabr) = Book of Proofs of Assertions Used by Diophantus (Kitāb al-barāhīn `alā'l-qaḍāyā allatī ista`malahā Diyūfanṭus). Commentary on "Arithmetic" of Diophantus (3[rd] c. A. D.).

M12. Book of the Commentary on the Book of Hipparchus on Algebra (Kitāb tafsīr kitāb Ibarkhus fi'l-jabr). This book of Hipparchus (1[st] century B.C.) is unknown to historians of mathematics.

M13. Book of Commentary on the Book of Euclid (Kitāb tafsīr kitāb Uqlīdis), unfinished.

A1. [Revision of the] Book of "Almagest" (Kitāb al-Majisṭī) - Cairo (hay'a 73), Paris (2494). Turkish translation of the mathematical chapter: Zeki [2] (106-120). Research with publication of some fragments in Arabic and French translation: Carra de Vaux [2]. Research: Anschütz [1], Kennedy [40], Woepcke [9] (length of circumference). Research of Abū'l-Wafā"s theory of movement of the Moon (the discovery of the "third inequality of the Moon"): Bertrand [1-5], Biot [1-2], Chasles [2-6], Munk [1-2], Sédillot [2, 5, 11-12]. Research of trigonometric chapter: Braunmühl [1] (52-59), Cantor [1] (746-748). Description of the Book IV of the Cairo manuscript: Ruska and Hartner [1] (186-187). In the trigonometrical chapter, the spherical sine law was proved, many trigonometrical formulas were proved, table of sines (to 4[th] sexagesimal digit, equivalent to 8[th] decimal) was given.

A2. Treatise on Establishment of the Proof [of Determination] of the [Angle of] the Turn of Celestial Sphere by Day Arc, Noon Altitude, and the Altitude at [the Given] Time (Risāla fī iqāmat al-burhān `alā'l-dā'ir min al-falak min qaws al-nahār wa irtifā` niṣf al-nahār wa irtifā` al-waqt) - Patna (2468/7). Edition: "Rasā'il mutafarriqa" [1] (No 5). Research: Nadir [1]. Solution of an astronomical problem which can be reduced to spherical Cosine law.

Mu1. [Revision] of "Canon of Part of Harmony" of Euclid (Qānūn juz' al-ta'līf li- Uqlīdis) - Rampur (I 576). Revision of Euclid's "Division of Canon".

Mu2. [Treatise on Rhythms] - is mentioned by al-Akfānī in (No 703, E1); see Wiedemann [81] (18).

257. `UMAR IBN ABI 'L-WAFA

Abū Sa`īd `Umar ibn Abī'l-Wafā al-Būzjānī (10-11 c.), son of Abū'l-Wafā al-Būzjānī No 256.

See: KZ (V 599), MAMS (II 181).

M1. Ascension of Sciences in the Sciences of the Ancients and Arithmetic (Maṭāli` al-`ulūm fī `ulūm al-awā'il wa'l-ḥisāb) - is mentioned in KZ as a manuscript in 600 folios.

258. SAHL IBN AL-`ATTAR

Abū'l-Qāsim Sahl ibn Ibrāhīm ibn Sahl ibn Nūḥ (912-997), was known by the name "Ibn al-`Aṭṭār" (son of a perfumer), from Berbers, born in Esija, Spain, studied in Cordoba; he was an arithmetician and scholar of Qur'anic studies.

See: MAA (72-73), MAMS (II 181); Ibn al-Faraḍī [1] (I 162).

259. NUR AL-DIN AL-BALKHI

Nūr al-Dīn Abū'l-Qāsim `Alī ibn Aḥmad al-Balkhī (10th c.), from Balkh, astronomer.

See: GAL² (II 298), GAS (VII 176-177), MAA (176), MAMS (II 495), PL (No 107), SSM (42). GAL, MAA and MAMS believed that this author lived in 15th c., but GAS proved, that he lived in 10th c.

A1. Book of Introduction to the Science of Stars (Kitāb al-Madkhal fī `ilm al-nujūm) P - Berlin (IGMN III. 1), Cairo (mīqāt 143, 876/2, 1204, Fāḍil mīqāt 207, Ṭal`at majlis 425/1, Taymūr riyāḍa 184), Istanbul (SM AS 2702), Patna (2479), Princeton (Yehuda 4072). The Cairo manuscripts mīqāt 1204 and Ṭal`at majlis 425/1 are erroneously ascribed to Abū Ma`shar al-Balkhī (No 88). Description of the Berlin manuscript: Ruska and Hartner [1] (216-217).

A2. Samad on Proof That Heaven has no Support (al-Ṣamad fī bayān anna al-samāwāt bi-ghayr 'amad) - Hyderabad (I 190).

A3. Ascensions on Horizon (Maṭāli` al-'ufuqī) - Baku (B 44).

A4. [Calculation of the Distance between Baghdad and Mecca] - Paris (5968/2). English translation and research: Kennedy [40].

260. MUSA AL-NAWBAKHT

Abū-l-Ḥasan Mūsā ibn al-Ḥasan ibn Muḥammad ibn Kibriyā al-Nawbakhtī or ibn Nawbakht (d. ca 1000), astronomer. Nephew of Hasan al-Nawbakhtī (No 127).

See: GAS (VII 172).

A1. Perfect Book on the Secrets of Stars (al-Kitāb al-kāmil fī asrār al-nujūm). Edition and Spanish translation by Labarta: Mūsā ibn al-Nawbakht [1]. Research: Van Brummelen [3]. Treatise on astrological chronology and geography.

261. `ABD AL-RAHMAN IBN BADR

`Abd al-Raḥmān ibn Ismā`īl ibn Badr (10th c.), known as "Uqlīdis al-Andalusī"(Andalucian Euclid); knew geometry and logic well.

See: MAA (73), MAMS (II 181), TH (225); Tuqan [1] (264).

262. SA`ID AL-SARAQUSTI

Abū `Uthmān Sa`īd ibn Fatḥūn ibn Mukram al-Tujībī al-Saraqusṭī (10-11th c.), was known by the name "al-Ḥammār" (drover of donkeys), from Zaragoza, worked in Cordoba under Caliph Hishām II; he knew history, logic, mathematics, and other "sciences of antiquity". He was persecuted by the Islamic clergy and died in exile in Sicily.

See: MAA (73), MAA³ (171), MAMS (II 181-182); al-Ḍabbī [1] (299), al-Maqqarī [1] (II 133).

E1. Collected Treatises and Sources (Rasā'il majmū'a wa 'uyūn) - is mentioned by al-Maqqarī.

263. SHA'YA IBN FIRIGHUN

Sha'yā ibn Firīghūn (10-11th c.), encyclopaedist, pupil of Zayd al-Balkhī (No 156).

See: GAL (I 435), MAA (73), MAA³ (171), MAMS (II 182), SSM (50-51).

E1. Collection of Sciences (Jawāmi' al-'ulūm) - Cairo (ma'arif 527-528), Escorial (II 950), Istanbul (TK 2675, 2768). Description of the Escorial manuscript: Derenbourg [7] (82-83). Edition: Sha'ya ibn Firīghūn [1]. Research: Dunlop [2], Khidiv Jam [1]. Encyclopaedia, based on an original classification of sciences.

264. MUHAMMAD AL-KALWADHANI

Abū Naṣr Muḥammad ibn 'Abdallāh al-Kalwādhānī (10th c.), worked in Baghdad under Buyid Sultan 'Aḍud al-Dawla.

See: GAS (V 304), KF (284), KF² (41), MAA (74), MAMS (II 182), TH (288); Tuqan [1] (261).

M1. Book of the Board on Hindu Arithmetic (Kitāb al-takht fī'l-ḥisāb al-hindī) - is mentioned in the arithmetic treatise (No 341, M1) by al-Nasawī [1] (383).

265. DUNAS AL-QARAWI

Dunāsh ibn Tamīm ibn Ya'qūb al-Isrā'īlī al-Qarawī (10th c.), Jewish philosopher, physician and astronomer: worked in Qayrawan at the court of Fatimid Caliph al-Manṣūr (946-953), pupil of physician Isḥāq al-Isrā'īlī, see GAS (III 295-297).

See: GAL² (I 868), GAS (VI 196-197), MAMS (II 182-183); Steinschneider [13] (72-&3).

A1. Book on Operations with Astronomical Instruments Called Armillary Sphere (Kitāb fī'l-'amal bi'l-āla al-falakiyya al-ma'rūfa bi-dhāt al-ḥalaq) - Istanbul (SM AS 4861/1). Description of the manuscript: SHIM (515-516). English translation of the introduction and research: Stern [2].

A2. [Astronomical Treatise Written according to the Request of Abū Yūsuf Ḥasday ibn Isḥāq], is mentioned in PH1, see Vajda [1] (140).

PH1. [Commentary on the "Book on Creation"], commentary on the biblical book "Genesis". Research: Vajda [1].

266. AL-HASAN IBN AL-KHAMMAR

Abū'l-Khayr al-Ḥasan ibn Suwār ibn Bābā ibn Bihrām (born 942), known by the name "Ibn al-Khammār" (son of a wine merchant); a Christian that converted to Islam towards the end of his life. Pupil of Yaḥyā ibn 'Adī (No 198); worked in Gurganj at the court of Khwārizmshah al-Ma'mūn (1009-1017), after 1017 at the court of Sultan Maḥmūd Ghaznawī (998-1030) in Ghazna. philosopher, physician, and translator from Syriac into Arabic. He translated "Meteorologics" of Aristotle.

See: KF (265), KF² (16), MAA (74), MAMS (II 183), TH (313), UA (I 322-323); al-Bayhaqī [1] (138-139), Meyerhof [1] (421).

Mt1. Book on Atmospherical Phenomena which is the result of water vapor: Halo, Rainbow, and Fog (Kitāb al-āthār al-mukhayyala fī'l-jaww al-ḥāditha 'an al-bukhār al-mā'ī wa-hiya al-hāla wa'l-qaws wa'l-ḍabāb) - is mentioned in KF.

267. 'ALI AL-SULAMI

Abū'l-Ḥasan 'Alī ibn al-Muslim ibn Muḥammad ibn 'Alī al-Fatḥ al-Sulamī (10th c.), was known as "Awḥad al-Shām" (Unique in Syria), Syrian mathematician.

See: GAL² (I 858), MAMS (II 183).

M1. Sufficient Introduction to Elements of Algebra and Almucabala and what is Possible to Learn on Specimens of this from Examples (al-Muqaddima al-kāfiyya fī uṣūl al-jabr wa'l-muqābala wa mā yu'rafu bihi qiyāsuhū min al-amthila) - Rome (Sbath 5). Research: Rashed [22] (solution of a special case of cubic equation in radicals).

268. NASR AL-`AZIZI

Naṣr ibn `Abdallāh al-`Azīzī (second half of 10th c.), mathematician.

See: GAL² (II 1024), GAS (V 314, VI 208, VII 407), MAMS (II 183-184), STMI (413); Utsekha [1].

M1. First Book on Ellipses (al-Kitāb al-awwal fī taqṭī` al-nāqiṣ) - Calcutta (Madrasa 342).

M2. Treatise on Determining the Chord of Heptagon (Risāla fī istikhrāj watar al-musabba`) - Oxford (I 913/29, 940/8, 987/37).

A1. Treatise on Determining the Azimuth of Qibla (Risāla fī istikhrāj samt al-Qibla) - Damascus (4871/16). Research: Lorch [9].

269. HAMID AL-KHUJANDI

Abū Maḥmūd (or Muḥammad) Ḥāmid ibn Khiḍr al-Khujandī (d. ca 1000); mathematician and astronomer from Khujand (now in Tajikistan), worked in Rayy at the court of Buyid Sultan Fakhr al-Dawla (977-997). In 994 he made astronomical observations in Rayy by means of a mural sextant called "Fakhri Sextant". Al-Bīrūnī in "Geodesy" (No 348, G3) wrote about this sextant: "This Fakhrī sextant surpassed all that was made before and after, in grandeur and precision, because Abū Maḥmūd was a unique master of the art of making astrolabes and all other instruments" (al-Bīrūnī [31], 75). This sextant was described by al-Bīrūnī in "Geodesy" (al-Bīrūnī [31], 70-71) and in the special treatise (No 348, A15).

See: GAL (I 247), GAL² (I 380), GAS (V 307-309, VI 220-222), IHS (I 667-668), KZ (III 416, V 120), MA (69, 141), MAA (74, 213), MAMS (II 186), SSM (40); Abdulla-zade [1], Abdulla-zade and Neghmatov [1], Bruin [1], Bulgakov [1], Neghmatov [1], Oudet [1], Qurbani [1] (158-168), Samsó [19] (EI²), Sayılı [18] (118-121), Tekeli [11] (DSB), [16] (ENWC), Tuqan [1] (273), Wiedemann [112], [197] (EI).

M1. Various Geometric Problems (Masā'il mutafarriqa handasiyya) - Cairo (Fāḍil riyāḍa 41/29). Research: Schoy [30].

M2. [Arithmetic Treatise] - is quoted in the work (No 194, M2) by al-Khāzin where al-Khāzin writes that in this treatise there is the proof that "sum of two cube numbers is not a cube number", that is, the equation ($x^3+y^3=z^3$) has no rational solutions. Since this treatise, like (No 194, M2), is devoted to the construction of right-angle triangles with rational sides, and was written before (No 194, M2), it is very plausible that this treatise coincides with the anonymous treatise Paris 2457/19 whose manuscript does not have a beginning with the name of the author and the text quoted by al-Khāzin. Edition of the Paris manuscript and its research: Woepcke [11] (301). French translation: Woepcke [16]. In the Paris manuscript al-Khujandī is called "Abū Muḥammad". In the manuscript, the original of which was written in 970, the words "let Allah be merciful to him" are added to his name. This was usually related to people who died. Often the author of this treatise, Abū Muḥammad al-Khujandī, is regarded as a person other than Abū Maḥmūd al-Khujandī. However the names Maḥmūd and Muḥammad are very near and often are confused (see al-Khāzin, No 194), the words "let Allah be merciful to him" could be added by a further copyist, and the existence of two al-Khujandīs is not confirmed by any source.

A1. Book on the Universal Instrument (Kitāb al-āla al-shāmila, Kitāb al-āla al-`āmma) - Birmingham (560), Bursa (Haraççıoğlu, 1217), Cairo (mīqāt 970 - anonymous), Oxford (I 970), Tehran (Nasiri). Description of the Cairo manuscript: Kunitzsch [1] (5). Treatise in 5 books.

A2. Treatise on Determining the Declination and Latitude of Cities with more Accuracy (Risāla fī taṣḥīḥ al-mayl wa `arḍ al-balad) - Beirut (Greek. 364/1). Edition by Cheikho: al-Khujandī [1], its reproduction: Abdulla-zade and Neghmatov [1], 80-81. German translation: Schirmer [1] (63-79). Russian translation by Abdulla-zade: al-Khujandī [2]. Exposition: al-Bīrūnī [31] (71-77). Research: Abdulla-zade [6], Abdulla-zade and Neghmatov [1] (49-52).

A3. Book on Operations with the [Astrolabe] Zarqāla (Kitāb al-`amal bi'l-zarqāla) - is mentioned in KZ (V 128).

A4. Detailed Treatise on the Universal Tympanum of Horizons (Risāla al-ṣafīḥa al-āfāqiyya al-musammā bi'l-jāmi`a) - is mentioned in KZ (III 418) in two variants - in 60 and 15 chapters. "Universal astrolabe" suitable "for all horizons", that is suitable for all latitudes as mentioned in A3 and A4 was described by al-Zarqālī (No 402) in detail and was usually called "astrolabe zarqala". The name "zarqāla" in the title of A3 might have been inserted by a copyist who was acquainted with the astrolabe of al-Zarqālī; it is also possible that this name was in the original manuscript of A3 and al-Zarqālī obtained his name from this astrolabe. This possibility is discussed by Ahmedov and Rosenfeld [3].

A5. Book on the Azimuth of Qibla (Kitāb samt al-Qibla) - is mentioned in "Cartography" (No 348, M5) by al-Bīrūnī, see Ahmedov and Rosenfeld [2] (133).
A6. Book on the Past Hours of Night (Kitāb fi'l-sā'āt al-māḍiyya fi'l-layl) - is mentioned in the anonymous treatise "Collection of Rules of the Science of Astronomy" (Istanbul, TK 3342/1, see Khayretdinova [1], 452), which contains al-Khujandī's proof of the spherical Sine law.

270. `ALI AL-SUMAYSATI

`Alī ibn Muḥammad ibn Yaḥyā al-Sumaysāṭī (983-1061), from Sumaysat (ancient Samosata), Syria, mathematician.
See: GAS (VII 413-414); Zirikli [1] (V 147).
M1. On Difference between [Angles under] Equal Arcs: Closer from Circumference are Greater than those Far from it (Fī anna ikhtilāf al-qisiy al-mutasāwiyya al-qarība min al-dawra a`ẓam min al-ba`īda `anhā) - Oxford (I 943/25, 987/21). Description: GAS (VII 414).
M2. On Meaning of the Difference between two lines in Tables of Chords which are in a Circle (Fī ma`na faṣl mā bayna'l-saṭrayn min jadāwil al-awtār al-wāqi`a fi'l-dā'ira) - Oxford (I 943/25a, 987/21a). Description: GAS (VII 414). Treatise on trigonometric tables of the function chord $\alpha = 2 \sin(\alpha/2)$ of arc α.
M3. His [Answer] to the Question about the Mutakallims who Opine that Compound Solids Consist of Separate Substances (Mā su'ila `anhu min ra'y al-mutakallimīn fi anna al-ajsām murakkaba min jawāhir farda) - Oxford (I 943/25b, 987/21b). Description: GAS (VII 414). According to its title, this work seems to be a treatise on physics, but its location in a collection of geometric works and the mention of mutakallims show that the topic of this work is mathematical atomism.

271. AHMAD AL-HARAWI

Abu'l-Faḍl Aḥmad ibn Abī Sa`īd al-Harawī (10th c.), astronomer from Herat; worked in Rayy. The astronomical observations he made in 959-960 are described in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (67-68).
See: GAL^2 (I 854), GAS (V 329, VI 218), KZ (I 390), MAA (228), MAMS (II 186-187); Pingree [52] (EIr), Qurbani [1] (116-119).
M1. [Revision of] the Book of Menelaus on Spherical Figures (Kitāb Manālāus fi'l-ashkāl al-kuriyya) - Istanbul (TK 3464/5), Leiden (399/2). Description of the Istanbul manuscript: SHIM (466). Description and partial German translation: Krause [2] (34-42). Revision of Menelaus' "Spherics".
A1. Introduction for al-Ṣāḥib (al-Madkhal al-Ṣāḥibī) - introduction to astronomy and astrology dedicated to Buyid vizier al-Ṣāḥib Ismā`īl al-`Abbād, is quoted in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (129, 177). Apparently, the same work is quoted in "Mas`udic Canon" (No 348, A1) by al-Bīrūnī [14] (66, 612).

272. MUHAMMAD IBN AL-NADIM

Abu'l-Faraj Muḥammad ibn Abī Ya`qūb Isḥaq al-Nadīm al-Warrāq al-Baghdādī (d. 993), copyist (al-warrāq), historian and bibliographer, worked in Baghdad.
See: AGL (238-239), GAL (I 153), GAL^2 (I 226-227), GAS (I 385-388), IHS (I 662), KZ (III 94, IV 483), MAMS (II 187); Farmer [4] (32), Flügel [3], Fück [1-2], [5] (EI^2).
HS1. Book of Bibliography of Sciences (Kitāb fihrist al-`ulūm) - Baghdad (784), Cairo (riyāḍa 898/17 - Book VII), Dublin (Beatty 3375), Istanbul (Köprülü 1134, SM Şehit 1934), Leiden (1221), Medina (`Arif Ḥikmat, Ta`rik 488), Paris (4457), Vienna (34). Edition by Flügel, Roediger and Müller: Ibn al-Nadīm [1] (KF). Edition by Tajaddud: Ibn al-Nadīm [5]. Edition by Dodge with English translation: Ibn al-Nadīm [4]. German translation of chapters on mathematicians by Suter: Ibn al-Nadīm [2] (KF^2). Edition of chapters on mu`tazilites by Fück: Ibn al-Nadīm [3]. Edition and German translation of chapters on Sabians: Chwolsohn [1] (II 1-52). Edition and German translation of chapter on Mani: Flügel [5]. French translation of chapters on alchemists: Berthelot [1] (III 26-40). Research: Flügel [3], Karpinski [1], Polosin [1-4], Suter [2]. Wiedemann [72]. Polosin [1] proved that the extant text is an abridgement of an original text. Bio-bibliographical directory on scholars and their works containing a chapter on Indian figures (research of this chapter: Polosin [2]).

273. AL-HASAN AL-QUMMI

Abū Naṣr al-Ḥasan ibn ʿAlī al-Munajjim al-Qummī (d. ca 1000), from Qumm, astronomer and astrologer (munajjim).

See: GAL (I 253), GAL^2 (I 398), GAS (VII 174-175), KZ (II 3-4, V 473), MAA (74-75), MAMS (II 187-188), PL (II 40-41), SSM (44).

A1. Excellent Book of the Introduction to the Science of Predictions of Stars (al-Kitāb al-bāriʿ al-Madkhal ilā ʿilm aḥkām al-nujūm) = Introduction to the Science of Predictions of Stars (al-Madkhal ilā ʿilm aḥkām al-nujūm) - Berlin (5663), Cairo (falak 8527/1, mīqāt 975, Fāḍil mīqāt 208, Ṭalʿat mīqāt 222/2), Istanbul (SM Fatih 3427/1, Yeni Cami 1193/1), London (Ind. 769/4), Oxford (II 371/1), Paris (2582), St. Petersburg (B 1048). Description of the Berlin manuscript: Ahlwardt [1] (147-149). Treatise in 5 books written in 968.

A2. The Most Perfect [Book] on Prescriptions of Stars and Births (al-Bāriʿ fī aḥkām al-nujūm wa'l-tawāliʿ) P - Berlin (5662-5663). Persian version of A1.

274. MUHAMMAD AL-KATIB AL-KHWARIZMI

Muḥammad ibn Aḥmad ibn Muḥammad ibn Yūsuf al-Kātib al-Khwārizmī (second half of 10th c.), scholar-encyclopaedist, worked in Bukhara at the court of Samanid ruler Nūḥ II (976-997).

See: GAL^2 (I 434), GAS (III 315-316, IV 289-290, VI 239-240, VII 237), IHS (I 659-660), KWA (II 22), KZ (VI 4), MAMS (II 188); Adnan [4] (IA), Bosworth [2], Farmer [4] (32), Hasanov [7] (62-64), Khayrullayev and Bahadirov [1], Khayrullayev and Sharipov [1], Sabra [23] (EI^2), Siddyqov [8] (20-28), Wiedemann [193a] (EI), [203a] (IA).

E1. Keys of Sciences (Mafātīḥ al-ʿulūm) - Istanbul (SM Carullah 2047), Leiden (514, 1960, 8307), Mahachqala (1/10). Editions: by van Vloten - al-K. al-Khwārizmī [1]. Cairo edition - al-K. al-Khwārizmī [2]. Persian translation by Hidiw Jam - al-K. al-Khwārizmī [3]. German translations: Wiedemann [24] (19-56) - chapter on mechanics, [28] (307-313) - chapters on technology, [32] (2-29) - chapters on arithmetic and geometry, [36] (32-35) - chapters on astronomical instruments, [40] (303-310) - chapters on weights and measures, [42] (76-81, 92-95, 101-103) - chapter on chemistry, [48] (211-229) - chapters on mineralogy, [65] (216-242) - chapter on astronomy, [81] (8-16) - chapter on music. Russian translation of the chapter on philosophy by Sharipov: al-K. al-Khwārizmī [4]. Research: Bahadirov [1-8], Khayrullayev and Sharipov [1], Matvievskaya [21] (91-92), Matvievskaya and Ibadov [2], Seidel [1] (medicine), Wiedemann [31] (mathematics), [39], [44] (geography), [63] (astronomy). Treatise in 2 books: 1) theology, rhetoric, grammar, literature, 2) philosophy, logic, nedicine, arithmetic, geometry, astronomy, music, mechanics, chemistry.

275. ABU BAKR

Abū Bakr (10th c.), mathematician.

See: MAMS (II 188-189).

M1. [Treatise on Semiregular Polyhedra] - is quoted in the treatise (No 277, M19) by al-Kūhī, see Ruska and Hartner [1] (170).

276. AL-HASAN AL-ANSARI

Al-Ḥasan ibn Jaʿfar al-Anṣārī (10-11th c.), astronomer.

See: GAS (VII 169), SSM (40).

A1. Period of Mercury (Dawr uṭāridī). Commentary: (No 636, A1) by al-Fāriqī. The treatise was written in 987.

277. WAYJAN AL-KUHI

Abū Sahl Wayjan (or Wījan) ibn Rustam al-Kūhī (or al-Qūhī) (10-11th c.), from Kuh in Tabaristan, worked in Baghdad under Buyid amirs ʿAḍud al-Dawla (949-983) and Sharaf al-Dawla (983-990). Organized an astronomical observatory in 988. His observation in 969 in Shiraz together with al-Ṣūfī (No 212), Ghulām Zuḥal (No 217), Ibn Yumn (No 243), and al-Sijzī (No 296) is described in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (68).

See: GAL (I 254), GAL^2 (I 399-400), GAS (V 314-321, VI 218-219, VII 407-408), HD (329), HD^2 (217), IHS (I 665), KF (283), KF^2 (40, 74), KZ (III 449), MA (92, 128), MAA (75-76), MAMS (II 189-193, III 363), SSM

(41), STMI (290), TH (351-354); al-Bayhaqī [1] (156), Berggren [10] (78-82), Dold-Samplonius [4] (DSB), [20] (ENWC), Pingree [49] (EIr), Qurbani [1] (195-213), Rashed [36, 42], U. Sultonov [3] (15-16), Tuqan [1] (249-252), Vernet [28] (EI²).

M1. First Two Books of Euclid's Work "Elements" (al-Maqālatān al-ūlā wa'l-thāniya min kitāb Uqlīdis fi'l-Uṣul) - Cairo (Fāḍil riyāḍa 41/12). Revision of the Books I and II of Euclid's "Elements".

M2. Abridgement of the Assertions of the First Book of Euclid's Work (Ikhtiṣār da`āwi al-maqāla al-ūlā min kitāb Uqlīdis) - Mashhad (5412). Exposition of the Book II of "Elements".

M3. On Propositions that Must be Added to the Second Book [of Euclid's Work "Elements"] (Fī mā zāda min al-ashkāl fī amr al-maqāla al-thāniya) - Patna (2519/25).

M4. [On Propositions] that Must be Added to the End of the Third Book of Euclid's Work "Elements" (<Fī mā> zāda min al-ashkāl fī ākhir al-maqāla al-thālitha min Kitāb al-uṣul li-Uqlīdis limā yuḥtaju `alayhi) - Berlin (5922).

M5. Supplements to the Book "Data" of Euclid (Ziyādāt li-kitāb Uqlīdis fi'l-Mu`ṭayāt) - Istanbul (SM AS 4832/26, 4839/9e). Istanbul manuscripts SM AS 4839/9a-9h have a common title "Geometric Treatises of al-Kūhī" (al-Rasā'il al-handasiyya li'l-Kūhī).

M6. Supplements to (Treatise for More Accuracy of) the Second Book of the Work "On Sphere and Cylinder" of Archimedes (Ziyādāt li'l- (Risāla fī taṣḥīḥ al-) maqāla al-thāniya min Kitāb al-kura wa'l-usṭuwāna li-Arshimīdis) - Cairo (riyāḍa 898/26), Leiden (14/25), London (Ind. 743/6), Paris (2468/8). Edition: as supplement to the edition of the exposition of Archimedes' work (No 606, M4) by al-Ṭūsī - al-Ṭūsī [15] (Nos 5, 115-127). Edition with critical translation and research: Berggren [16]. French translation by Woepcke: Khayyām [1] (103-114). Research: Zeuthen [1]. Reduction of problems of Archimedes to cubic equations, solutions of these and analogous problems by means of parabolas and hyperbolas, and investigation of these solutions.

M7. Book on the Construction of the Astrolabe by the Proof (Kitāb ṣan`at al-asṭurlāb bi'l-burhān) - Cairo (riyāḍa 898/12), Leiden (14/10). Edition: Berggren [15] (205-252). English translation: Berggren [15] (147-185). Research: Berggren [15] (141-146, 186-204). Treatise in 2 books, 4+7 chapters on the construction of the astrolabe and on mathematical proof of this construction.

M8. On the Perfect Compass and Operations with it (Fi'l-birkār al-tāmm wa'l-`amal bihī) = Book on the Instrument called the Perfect Compass (Kitāb fi'l-āla allatī tusammā al-birkār al-tāmm) - Aligarh (Univ. I), Cairo (Fāḍil riyāḍa 41/13, Ṭal`at majlis 239/2), Istanbul (Ragıp 569/5; TK 3342/6, 3494/3; Univ. A 314), Leiden (161/1), New Haven (1490), St. Petersburg (A 285/1), Tehran (Mu`tamid). French translation of the Leiden manuscript: Woepcke [26] (145-175). Russian translation of a fragment by Krasnova: Ibn Sinan [2] (441-442). Research: Damardash [5a]. Continuous drawing of conic sections: for ellipse by means of a thread with ends fixed in the foci of ellipse ("gardener construction") with reference on the treatise (No 74, M3) of Banū Mūsā, and for all three chapters by "perfect compass", that is, compass with one leg having variable length, and with other leg fixed under constant angle to the plane of paper: if this constant angle is α and the angle between legs of compass is β, then the drawn conic has the excentricity $\epsilon=\frac{\cos\alpha}{\cos\beta}$, that is, for $\alpha>\beta$ it is ellipse, for $\alpha=\beta$ parabola, and for $\alpha<\beta$ hyperbola.

M9. Treatise on Determining one Side of Equilateral Heptagon Inscribed in a Circle (Risāla fī istikhrāj ḍil` al-musabba` al-mutasāwī al-aḍlā` fi'l-dā'ira) - Cairo (Fāḍil riyāḍa 40/21), Damascus (5648/21), Escorial (II 960 - a fragment), Paris (4821/3). Facsimile edition of the Cairo manuscript and German translation: Samplonius [1]. Research: Hogendijk [5].

M10. Treatise on the Construction of one Side of Equilateral Heptagon Inscribed in a Circle (Risāla fī `amal ḍil` al-musabba` al-mutasāwī al-aḍlā` fi'l-dā'ira) - Berlin (IGMN I 17), Damascus (5648/21), Istanbul (SM AS 4832/27), London (Ind. 767/4), Oxford (143/28), Paris (4821/1), Tehran (Univ. 1751). Research: Hogendijk [5].

M11. Book on Trisection of an Angle and Construction of one Side of Equilateral Heptagon Inscribed in a Circle (Maqāla fī tathlīth al-zāwiya wa `amal ḍil` al-musabba` al-mutasāwī al-aḍlā` fi'l-dā'ira) - Oxford (I 143/29, 987/36). Research: Hogendijk [5].

M12. Method of Determining Two Lines between Two Lines Which Successively Are in [The Same] Ratio (Ṭarīq fī istikhrāj khaṭṭayn bayna khaṭṭayn tatawālā `alā nisba) - London (Ind. 767/5). Construction of Two Mean Proportionals.

M13. Treatise on the Division of an Angle between Two Straight Lines on Three Equal Parts (Risāla fī qismat al-zāwiya al-mustaqīmat al-khaṭṭayn bi-thalāthat aqsām mutasāwiyya) - Istanbul (SM AS 4830/9). Edition with Turkish and English translations: Sayılı [21]. Research: Sayılı [21-22].

M14. Treatise on Determining Such Two Lines between Two Lines That Four Successive Lines Are in [One] Ratio and on Division of an Angle on Three Equal Parts (Risāla fī istikhrāj khaṭṭayn bayna khaṭṭayn ḥattā tatawālā al-arba'a 'alā nisba wa qismat al-zāwiya bi-thalāthat aqsām mutasāwiyya) - Cairo (Fāḍil riyāḍa 40/22), Damascus (5648/22), Istanbul (SM AS 4832/28).

M15. Book on Centers of Tangent Circles Are [Located] on [Straight] Lines - by Method of Analysis (Kitāb marākiz al-dawā'ir al-mutamāssa 'alā'l-khuṭūṭ bi-ṭarīq al-taḥlīl) - Paris (2457/2). Edition: Abgrall [1] (277-282). French translation: Abgrall [1] (287-295). Research: Abgrall [1] (263-276).

Construction of a circle with the center located on a known straight line and tangent to two given points or circles from straight lines .

M16. Drawing of Two Lines from a Point under a Known Angle (Ikhrāj al-khaṭṭayn min nuqṭa 'alā zāwiya ma'lūma) - Paris (2457/8). Edition and English translation: Berggren and Van Brummelen [3]. Research: Berggen [17], by Woepcke: Khayyām [1] (55-56).

M17. On Determining the Volume of a Parabolic Solid (Fī istikhrāj misāḥat al-mujassam al-mukāfī') - Cairo (Fāḍil riyāḍa 40/15), Damascus (5648/13), Istanbul (SM AS 4830/9a, 4832/23), Patna (2519/33). Edition: "al-Rasā'il al-mutafarriqa" [1] (No 6). German translation: Suter [32] (213-215, 220-221). Research: Suter [32], al-Dabbagh [1]. Calculation of volumes of solids obtained by the revolution of segments of parabolas bounded by a diameter and a chord conjugate with it around the diameter.

M18. Book on Volume of a Parabolic Solid (Kitāb misāḥat al-mujassam al-mukāfī') - Cairo (Fāḍil riyāḍa 41/20). This treatise does not coincide with M17.

M19. Various Geometric Problems of Certain Scientists (Masā'il handasiyya mutafarriqa li-ba'ḍ al-'ulamā) - Berlin (IGMN I 24), Damascus (5648/17). Description of the Berlin manuscript: Ruska and Hartner [1] (169-170). 12 problems: (4) of the author, on trisection of angle, (9) of al-Khujandī (No 269), on intersection of great circles on a sphere, (10) of Ibn al-Haytham (No 328) on a circle with two given points on the diameter, (11) of Ibn Qurra (No 103) on five regular polyhedra, (12) of Abū Bakr (No 275) on semiregular polyhedra.

M20. Two Geometric Problems (Mas'alatān handasiyyatān) - Cairo (Fāḍil riyāḍa 40/19), Istanbul (SM AS 4830/9d, 4832/22). Two problems, one of which contains the proof that homothetic maps circles onto circles. Edition and English translation: Berggren and Van Brummelen [1].

M21. Treatise on the Construction of an Equilateral Pentagon Inscribed in a Known Square (Risāla fī 'amal mukhammas mutasāwī al-aḍlā' fī murabba' ma'lūm) - Berlin (IGMN I 22), Cairo (Fāḍil riyāḍa 40/18), Damascus (5648/16), Istanbul (SM AS 4830/9c , 4832/21), Paris (4821/5), Tehran (Univ. 1751). Edition with English translation and research: Hogendijk [6]. Russian translation and research by Rosenfeld and Safarov: al-Kūhī [1]. Research: Hogendijk [6].

M22. Answer to the Letter of Abū Isḥāq al-Ṣābī' on Geometric propositions, Centers of Gravity and others (Jawāb 'an kitāb Abī Isḥāq al-Ṣābī' 'an al-ashkāl al-handasiyya wa marākiz al-thiqal wa ghayrihi) - Cairo (Fāḍil riyāḍa 40/20), Damascus (5648/18-20), Istanbul (SM AS 4832/24-25). Answer to letters of Abū Isḥāq Ibrāhīm ibn Hilāl (No 251, Me1-2). The section on Centers of Gravity is exposed in "Book of Balance of Wisdom" (No 476, Me1) by al-Khazinī [1] (17-19). Critique: Ibn al-Ṣura (No 458, M6). Research: Berggren [2, 7], Levinova and Rozhanskaya [2], Sesiano [5], Bancel [1]. Since the ratio of the height of the center of gravity to the height of whole figure for right round cone, segment of paraboloid of revolution, and hemisphere are equal to 1/4, 2/6, and 3/8 respectively, and for triangle and segment of parabola are equal to 1/3 and 2/5, respectively; al-Kūhī, by incomplete induction, decided that for circle this ratio is equal to 3/7, and since this ratio is also equal to $4/3\pi$, he "finds" that $\pi = 3\frac{1}{9}$. The treatise contains also a series of correct theorems on centers of gravity of plane figures.

M23. On the Ratio of Parts of a Line Located between Three Lines (Fī nisbat mā yaqa'u bayna thalāthat khuṭūṭ min khaṭṭ wāḥid) - Istanbul (SM AS 4830/9e). Description of the manuscript: SHIM (468). The work is dedicated to Amir Sharaf al-Dawla. Research: Berggren [17].

M24. Division of a Sphere by Planes (Taqsīm al-kura bi-suṭūḥ mustawiyya) - Tehran (Sipahsalar 693).

M25. Book on Establishment of [Positions] of Points on Lines Related to Plane Figures (Kitāb fī iḥdāth al-nuqaṭ 'alā'l-khuṭūṭ 'alā nisab al-suṭūḥ) - is mentioned in M8.

A1. On the Place of Ascension of a Known Arc of Ecliptic at the City with Known Latitude or Equation of Day ('An wujūd maṭāli' qaws ma'lūma fī falak al-burūj fī balad ma'lūm al-'arḍ aw ta'dīl nahārihā) - Istanbul (SM AS 4830/9e).

A2. Treatise on the Knowledge of a Magnitude of Distance from the Center of the Earth and Place of Stars Which Fall in Night (Risāla fī ma'rifat miqdār al-bu'd min markaz al-arḍ wa makān al-kawākib alladhī

yanqaddu bi'l-layl) - Paris (4821), Tehran (Bayani; Mahfuz 27). Edition and English translation Van Brummelen and Berggren [1]. Research: Rashed [53].

A3. Determination of the Azimuth of Qibla (Istikhrāj samt al-Qibla) - Mashhad (5412).

A4. Treatise of Abū Sahl al-Kūhī (Risālat Abī Sahl al-Kūhī) - Aligarh (Azad Habib 44/6). Treatise on the techniques of astronomical observations.

A5. [Rising Times of a Known Arc of the Ecliptic] - Istanbul (SM AS 4830/9f). Edition, English translation and research: Berggren and Van Brummelen [2]. Solution of the problem of determining the rising times of a known arc of the ecliptic by means of spherical trigonometry.

Me1. Reasoning on the Possibility of Infinite Motion on Finite Time (Qawl `ala anna fi'l-zamān al-mutanāhī ḥaraka ghayr mutanahiyya) - Istanbul (SM AS 4830/9). Edition with Turkish and English translations: Sayılı [14]. Research: Sayılı [14-15].

Me2. Book for Logicians on Succession of Two Motions, a Triumph of Thābit ibn Qurra (Kitāb `alā'l-manṭiqiyyīn fī tawālī ḥarakatayn - intiṣār li-Thābit ibn Qurra) - is mentioned in KF.

Ph1. Treatise on what is seen from Heaven (Risāla fī miqdār mā yurā min al-samā) - Mashhad (184).

Ph2. Treatise on what is seen from Heaven and Sea (Risāla fī ma`rifat mā yurā min al-samā wa'l-baḥr) - Istanbul (SM AS 2587/2, 4832/22). Description of the manuscripts: SHIM (467).

278. AL-HASAN AL-HUBUBI

Abū `Alī al-Ḥasan ibn al-Ḥārith al-Khwārizmī al-Ḥubūbī, or al-Maḥbūbī (10-11th c.), mathematician; was judge in Khwārizm.

See: GAL^2 (I 857), GAS (V 336), KZ (I 274), MAA (197), MAMS (II 193); J. Ibadov [4, 7], Qurbani (240-241).

M1. Book of Arithmetic and Algebra and Almucabala (Kitāb al-ḥisāb wa'l-jabr wa'l-muqābala - Princeton (1045).

M2. Arithmetic (Ḥisāb) - Mashhad (Fāḍil. 35).

M3. Book on Investigation and Classification in the Science of Arithmetic (Kitāb al-istiqṣā wa'l-tajnīs fī `ilm al-ḥisāb) = Book on Investigation in Algebra and Almucabala (Kitāb al-istiqṣā fi'l-jabr wa'l-muqābala) - Istanbul (Millet, Feyzullah 1366), Mashhad (12-13), Oxford (I 986/1). Description of the Istanbul manuscript: Sayılı [1] (11).

M4. Book of Investigation to Explain Methods of Calculations in Problems of Inheritance from Calculus of Algebra and Muqabala, of Methods of Geometry, of Method of Two Errors, and of Dinar and Dirham (Kitāb istiqṣā fī sharḥ ṭuruq al-ḥisāb fī masā'il al-waṣāyā min ḥisāb al-jabr wa'l-muqābala wa ṭuruq al-handasa wa'l-`amal bi-ṭarīq al-khaṭa'ayn wa'l-dīnār wa'l-dirham) - Tehran (Mahfuz 24), is quoted in (No 802, M1) by al-Kashi [1] (245-248).

M5. [Treatise on a Premise of Archimedes] - is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (Nos 1, 12-17). German translation of these fragments: Suter [47] (17-18). Russian translations of these fragments: Bulgakov - al-Bīrūnī [50] (112-116), Krasnova - al-Bīrūnī [23] (97-99). The quotation by al-Bīrūnī refutes the opinion of some historians of science that al-Ḥubūbī lived under Khwarizmshah Atsyz (1127-1156).

279. Al-HASAN AL-`ASKARI

Abū Hilāl al-Ḥasan ibn `Abdallāh al-`Askarī (d. 1004), historian, linguist, theologist and mathematician.

See: KZ (I 436, 490, II 33, 128, 371, 415, 630, III 114, 296, IV 109, V 83, 152, 159, 166, 308, 391, VI 120, 388), MAMS (II 193-194).

E1. Book on Principles (Kitāb al-awā'il) - Berlin (9369), Leiden 851, 2469), Munich 465).

M1. Book on Dirham and Dinar (Kitāb al-dirham wa'l-dīnār) - is mentioned in KZ (V 83).

280. AHMAD IBN FARIS AL-QAZWINI

Abū'l-Ḥusayn Aḥmad ibn Fāris ibn Zakarīyā ibn Ḥabīb al-Qazwīnī al-Lughawī (d. ca. 1005), from Qazwin, studied in Qazwin, Hamadan, and Baghdad; grammarian, jurist, theologian, and astronomer.

See: GAL (I 130), GAS (VII 360-361, VIII 209-214), KZ (I 197, 292, 446, III 112, 172, 335, IV 87, 454, 459, V 143, 361, 406, 432, VI 87, 162, 182, 424), MAMS (II 194); Fleisch [1] (EI^2), Forcada [2].

A1. Book on Anwā' according to the Arab Doctrine (Kitāb al-anwā' `alā madhhab al-`arab) = Concise [Selected] on Anwā' (Mukhtaṣar min al-anwā') - Beirut (Amer. 614/55, Damascus (4708), Tehran (Sipahsalar 2925). Research: Forcada [2].

A2. Book on Night and Day (Kitāb al-layl wa'l-nahār) - is mentioned in KZ (V 143) together with the revision of Theodosius' work "On Days and Nights" by al-Ṭūsī (No 606, A2).

281. MASLAMA AL-MAJRITI

Abū'l-Qāsim Maslama ibn Aḥmad al-Majrīṭī (d. 1008), from Madrid, worked in Cordoba under Caliphs al-Ḥakam II and Hishām II; was chief of Andalusian mathematicians of his time and teacher of many mathematicians and astronomers.

See: GAL (I 281), GAL² (I 431-432), GAS (III 294-298, V 334-335, VI 226-227), IHS (668-669), KZ (I 668-669, III 92, 345, 460, 500, IV 166, 300, V 166, 300, VI 280, 282), MAA (76-77), MAA² (167), MAA³ (179), MAMS (II 194-195), TH (326-327), UA (II 39); Ibn Bashkuwāl [1] (II 564), Calvo [8] (ENWC), Farmer [4] (34-35), Holmyard [1], Kunitzsch and Lorch [2], al-Maqqarī [2] (II 134), Mieli [2] (180-181), Samsó [11], Tuqan [1] (257-259), Vernet [17] (DSB), [38] (EI²), Vernet and Catalá [1], Wiedemann [200] (EI).

M1. Notes on the Book of Ptolemy on the Projection of a Sphere onto a Plane (Ta'līq 'alā kitāb Baṭlamyūs fī tasṭīḥ basīṭ al-kura) - Paris (4821). Latin translation by Hermann of Dalmatia, sometimes with commentary of F. Commandino, was published in all editions of the works of Ptolemy, as Ptolemy's original treatise in Greek was lost. Only the Latin translation under the title "Planisphaerium" is extant. Edition: Vernet and Catalá [1] (22-28). Spanish translation: Vernet and Catalá [1] (28-45) Research: Kunitzsch and Lorch [2]. The treatise was devoted to the stereographical projection and construction of a "horoscopic instrument" which coincided with the medieval astrolabe or was its prototype.

M2. [Revision of the Work of Ibn Qurra on Figure of Secants] - Escorial (972/2) -Revision of the work (No 103, M9) by Ibn Qurra.

M3. Book on the Fruits of [Science] drawn on Numbers (Kitāb fī thimār al-'adad) = Book on Deals (Kitāb al-mu'āmalāt) - is mentioned in TH under the first title and in UA under the second one. UA calls it "an excellent book on the whole science on numbers".

A1. [Revision of Zīj of al-Khwārizmī] - revision of Zīj (No 41, A1). Latin, English, Danish and Russian translations: Suter [42], Neugebauer [5], Björnbo [6], al-Khwārizmī [5] (89-93).

A2. On the Construction of Astrolabe and Its Use (Fī 'amal al-asṭurlāb wa'l-'amal bihī) - Escorial (967/3).

A3. Chapters which are Necessary for those who want to Construct an Astrolabe (Abwāb lā yastaghnī man yarūmu 'amal al-asṭurlāb 'anhā) - Paris (4821, after M1).

A4. [Revision of Astronomical and Astrological Treatises of Ikhwān al-Ṣafā'] - Escorial (942/2), Oxford (I 990), Paris (2306-2307), Vienna (1491). Revision of certain treatises from (No 226, E1) of al-Ṣafā'.

A5. Aim of a Sage (Ghāyat al-ḥakīm) - Cairo (Fāḍil farsi 7/6 - a fragment). Medieval Latin translation is known by the title "Picatrix". Edition of this translation by Ritter: al-Majrīṭī [1]. German translation by Ritter and Plessner: al-Majrīṭī [2]. Research: Hartner [11].

282. 'ISA IBN ZUR'A

Abū 'Alī 'Īsā ibn Isḥāq ibn Zur'a ibn Marqus (943-1008), born in Baghdad, Christian-Jacobite, pupil of Yaḥyā ibn 'Adī (No 198); philosopher and translator.

See: GAS (VI 240), HD (338), HD² (222), KF (264), MAA (77), MAMS (II 195-196), TH (245-246), UA (I 235-236); Anonymous [6] (EI²), Meyerhof [3] (422), Safa [1] (84, 359-360).

G1. An Abridgement of the Book of Aristotle on the Inhabited Part of the Earth (Ikhtiṣār kitāb Arisṭ[ūṭ]ālīs fī'l-ma'mūr min al-arḍ) - is mentioned in UA.

Ph1. Book on the Meaning of a Place of the Third Book of the Work "On the Heavens" (Kitāb ma'nā qiṭ'a min'l-maqāla al-thālitha min Kitāb al-samā') - is mentioned in UA. Commentary on the work "On the Heavens" of Aristotle.

A1. Book on the Cause of the Light of the Stars, Although They and the Spheres Which Bear Them Are Made from the Same Elementary Substance (Kitāb fī 'illat istinārat al-kawākib ma'a annahā wa'l-kurāt al-ḥāmila lahā min jauhar wāḥid basīṭ) - is mentioned in UA.

283. 'ALI IBN YUNIS AL-SADAFI

Abū'l-Ḥasan 'Alī ibn Abī Sa'īd 'Abd al-Raḥmān ibn Aḥmad ibn Yūnis al-Ṣadafī (ca 950-1009), son of well-known Arabic historian Abū Sa'īd 'Abd al-Raḥmān ibn Aḥmad ibn Yūnis (d. 958), worked in Cairo at the

court of Fatimid Caliphs al-`Azīz (975-996) and al-Ḥākim (996-1021); was the organizer and chief of the astronomical observatory on Muqattam mountain.

See: AGL (106-107), GAL (I 255-256), GAL² (I 400-401), GAS (V 342-343, VI 228-231, X), IHS (I 716-717), KWA (I 474-475), KWA² (I 365), KZ (II 105, 148, III 366, 399, IV 241, 244, VI 422), MA (136, 148), MAA (77-78), MAA² (167-168), MAMS (II 196-198, III 363), SSM (43-44); Abu'l-Fida [1] (II 619), Berggren [10] (148-151, 179-181), Delambre [2] (76-156), Farmer [4] (35), Goldstein [7] (EI²), Kennedy and Ukasha [2], King [1], [10] (DSB), [20], [76] (ENWC), King and Hartner [1], Mieli [2] (109-112), Sayılı [18] (130-155), Suter [42] (EI), [51] (IA), Tuqan [1] (275-281).

Collected papers of "Ibn Yūnis" [1], I-II.

A1. Great Zīj of al-Ḥākim (al-Zīj al-kabīr al-Ḥākimī) - Berlin (5752), Cairo (falak 4003/1, 4032, mīqāt 468/1, 593, 639/23, 718/1, 736/2, 909/4, Fāḍil mīqāt 31/2, 44/3, 116/1 - separate chapters; Azhar 4382), Dublin (Beatty 3673), Escorial (I 915/5, 924/7), Leiden (143, 2813), Oxford (II 298), Paris (2495, 2496/1, 2531/4). Edition of the foreword and chapters I-VI containing information about observations of Ḥabash al-Ḥāsib (No 46), al-Māhānī (No 82), Ibn Qurra (No 103), al-Nayrizī (No 135), al-Battānī (No 137), Banū Amajūr (No 157) and others and of Ibn Yūnis himself, with French translation by Caussin de Parceval: Ibn Yūnis [1] (49-237). French translation of remaining chapters by Sédillot: Delambre [2] (125-156). German translations: Schoy [4] (trigonometric chapters), [13] (determination of azimuth and altitude), [14, 18] (determining the latitude by Solar altitude), [19] (determining the longitude by Lunar eclipse), [21] (determining the azimuth of Qibla). French translation of geographical sections: Lelewel [1] (I 43-62, 165-177, II, table 3). Research: Braunmühl [3] (61-65), Delambre [2] (76-156), Hartner [24-25], King [1-2, 5], Reynolds [1]. Zīj in 81 chapters, dedicated to Fatimid Caliph al-Ḥākim.

A2. Book of Habtaq of Resolution [of Equations] of the Sun and the Moon (Kitāb ḥabṭaq ḥall al-shams wa'l-qamar) = Right Equation (al-Ta`dīl al-muḥkam) - Cairo (mīqāt 29), Gotha (1410 - anonymous fragment). Description of the Cairo manuscript: Kunitzsch [1] (21). Extensive double-argument solar and planetary equation tables ("ḥabṭaq" from Greek "epaktai" = double-argument table).

A3. Book of Resolution [of Equations] of the Sun (Kitāb maḥlūl al-shams) - Cairo (falak 4044/2)

A4. Book of Sine for Minute to Minute and Second to Second (Kitāb al-jayb li daqīqa fa daqīqa wa thāniya fa thāniya) - Berlin (5752-5753), Damascus (3109), Gotha (A 1410 - fragment). Research: King [5].

A5. Extremely Useful Book on Determining the Angle of Turn, Its Surplus, and Azimuth by Altitude (Kitāb ghāyat al-intifā` fī ma`rifat al-dā'ir wa faḍlihi wa'l-samt min qibal al-irtifā`) - Cairo (mīqāt 108; Azhar falak 4382). Description of the first manuscript: Kunitzsch [1] (76-77). Description of both manuscripts: King [2] (388-390). Research: King [2]. Book contains foreword and 19 tables.

A6. Tables of Surplus of Angle of Turn by Altitude (Jadāwil faḍl al-dā'ir min qibal al-irtifā`) - Cairo (Taymūr riyāḍa 191, 354), Dublin (Beatty 3673). Description of the manuscripts: King [2] (387-388). The work is a part of A5.

A7. Two Tables of Positions of Nodes and Kayd (Jadwalān li maqāmay al-jawazahir wa'l-kayd) - Cairo (Fāḍil 31/2).

A8. Treatise on the Method of Determining the Meridian (Risāla fī ṭarīq istikhrāj khaṭṭ niṣf al-nahār) - Milan (281e). German translation of two chapters: Schoy [29] (35-36).

A9. Book on Azimuth (Kitāb fī'l-samt) - Berlin (5753), Cairo (Fāḍil mīqāt 64, 137), Escorial (II 924/7). Descriptions of the manuscripts: Derenbourg [7] (32-33), King [2] (387-389). Solar azimuth tables for the latitude 30° of Cairo.

A10. [Treatise on Computation of Solar Eclipses] - Cairo (mīqāt 639/14). Treatise contains tables.

A11. Simplification of Explanation of Ephemerides of Planets (Tashīl al-`ibāra fī taqwīm al-kawākib al-sayyāra) - Aleppo (Awqat 947).

A12. Poem on the Knowledge of Prayer times (al-Manẓūma fī ma`rifat awqāt al-ṣalawāt) - Cairo (mīqāt 181/4).

Me1. Treatise on the Method of Determining Two Lines of Qustas (Risāla fī ṭarīq istikhrāj khaṭṭay al-qusṭās) - Milan (289b). Treatise on scale balance with movable weight.

Me2. Construction of a Chandelier with Twelve Lamps, one of which turns off at each hour of the night. (`Amal thurayyā yūqadu fīhā ithnā `ashara qandīlan fa kullamā māḍat sā`a min al-layl ṭafī`a minhā qandīl) - Beirut (223/12). Edition by Cheikho: Ibn Yūnis [2]. English translation: Kennedy and Ukashah [1] (543-544). Research: Kennedy and Ukashah [2].

284. MUHAMMAD IBN AL-`ATTAR

Abū `Abdallāh Muḥammad ibn Aḥmad ibn `Ubaydallāh ibn Sa`īd al-Umawī (Omeyyad) (942-1009), from Cordoba, was known by the name "Ibn al-`Aṭṭār" (son of a perfumer); knowledgeable in law and poetry, grammarian and arithmetician. He had many pupils.

See: MAA (78-79), MAMS (II 198); Ibn al-Abbār [1] (II 81).

285. ISA AL-MASIHI

Abū Sahl `Īsā ibn Yaḥyā al-Jurjānī al-Masīḥī (977-1011), from Jurjan, Christian (al-masīḥī); scholar with multifarious interests; mainly known as physician; teacher of Ibn Sīnā (No 317) in medicine; worked with him and al-Bīrūnī in Gurganj at the court the Khwarizmshah al-Ma'mun II (1009-1017). He was ordered to move to Ghazna by Sultan Maḥmūd Ghaznawī (998-1030), as he did not wish to move, he fled to Ghazna with Ibn Sīnā but perished in the desert.

See: GAL (I 238), GAL^2 (I 424), GAS (III 326-327, V 336-337, VI 241), HMA (I 356-357), IHS (I 678), KZ (II 311, V 220, 356), MAA (79), MAMS (II 199), UA (I 327-328); al-Bayhaqī [1] (160), Meyerhof [3] (426), Safa [1] (287), U. Sultonov [3] (8-10), Wüstenfeld [1] (59).

M1. Book on the Principles of Geometry (Kitāb fī mabādi' al-handasa) - is mentioned in (No 348, HS1) by al-Bīrūnī [8] (45).

A1. Book on Extraction of the Radical from the work "Almagest" (Maqāla fī'l-jidhrī ikhtiṣār kitāb al-Majisṭī) - is mentioned in UA.

A2. Book on whether the Earth is Immobile or Mobile (Kitāb fī sukūn al-arḍ aw ḥarakatihā) - is mentioned in (No 348, HS1) by al-Bīrūnī [8] (45).

A3. Treatise on Laws of the Art (Risāla fī qawānīn al-ṣinā`a) - is mentioned in (No 348, HS1) by al-Bīrūnī [8] (45).

A4. [Letter to al-Bīrūnī on the Number of Kinds of Lunar Eclipses] - is mentioned in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (133).

A5. [Astronomical Poem] - is quoted in "Chronology" (No 348, E1) by al-Bīrūnī [2] (74).

Ph1. Book on Mediation between Aristotle and Galenus on the First Motor (Kitāb fī'l tawassuṭ bayna Arisṭūṭālīs wa Jālīnūs fī'l-muḥarrik al-awwal) - is mentioned in (No 348, HS1) by al-Bīrūnī [8] (45).

286. `ABDALLAH IBN AL-FARADI

Abū'l-Walīd `Abdallāh ibn Muḥammad ibn Yūsuf ibn Naṣr ibn al-Azdī al-Faraḍī (962-1012), from Cordoba. After making the pilgrimage to Mecca, he became a pupil in Egypt and Qayrawan, later a judge in Valencia. He was killed by Berbers during the capture of Cordoba.

See: GAL (I 412), GAL^2 (I 577-578), KWA (324), [2] (358), MAMS (II 199-200); Ben Sheneb [4] (EI), [8] (IA), Ben Sheneb and Midanda [2] (EI^2), al-Ḍabbī [1] (888), Dozy [1] (III 308), Ibn Bashkuwāl [1] (248-258), al-Maqqarī [1] (I 545-547).

HS1. Book of History of Scientists of Andalucia (Kitāb ta`rīkh `ulamā al-Andalus). Edition: Ibn al-Faraḍī [1].

287. MUHAMMAD AL-HASHIMI

Abū `Alī Muḥammad ibn `Abd al-`Azīz al-Hāshimī (10th c.), jurist, mathematician and astronomer, worked in Raqqa, Syria. In "Geodesy" (No 348, G3) al-Bīrūnī [31] (264) informs that al-Hāshimī observed a Lunar eclipse in Raqqa in 932.

See: GAL^2 (I 886), GAS (V 305, VI 204-205, VII 167, 406), KZ (I 257), MAA (79), MAMS (II 200).

M1. Explanation of Reckoning Irrational Roots (Muwaḍḍiḥa fī ḥisāb al-judhūr al-ṣumm) - Oxford (I 913/36, 940/2), Paris (2457/16). Description of the Paris manuscript: Woepcke [8] (665). Russian translation: Matviyevskaya [5] (174-176), [20] (13-14, 18-22). Treatise is dedicated to Ja`far ibn al-Muqtafī (905-987), son of Caliph al-Muqtafī, and contains arithmetic operations over irrational roots which are illustrated by lines. Since lines are multiplied and divided, in this treatise irrational quantities are regarded as numbers.

M2. Explanation of Arithmetic with Drawings (Muwaḍḍiḥa dar ḥisāb-i rāsim) P - Mashhad (5258/2).

M3. Complete on Arithmetic (al-Wāfī fī'l-ḥisāb) - is mentioned in M1, where it is said that in this treatise the principles of arithmetic operations over irrational quantities are exposed.

A1. Perfect Zīj (al-Zīj al-kāmil) - is quoted in "Chronology" (No 348, E1) by al-Bīrūnī [2] (318), [15] (362-365) (the last chapter is absent in [2]).
A2. Explanation of the Difficulties of Zīj of al-Khwārizmī (Ta`līl zīj al-Khwārizmī) - is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (Nos 1, 118, 155). The works A1 or A2 are quoted also in "Geodesy" (No 348, G3) and "Mas`ūdic Canon" (No 348, A1) by al-Bīrūnī [31] (169, 264), [14] (613)

288. AL-HASAN IBN AL-BAHLUL

al-Ḥasan ibn al-Bahlūl (10th c.) from Syria, Christian (Nestorian) astronomer and astrologer, wrote in Syriac and Arabic.
See: GAS (VI 231, VII 282-283, 332-33); Baumstark [1] (241-242).
A1. Book of Indications (Kitāb al-dalā'il) - Istanbul (SM Fatih 5114/4, Hekimoğlu 572). Edition: Ibn Bahlūl [1]. Book in 49 chapters on calendars, astro-meteorology, astro-medicine, and interpretation of dreams.

289. YUSUF AL-RAMADI

Abū `Umar Yūsuf ibn Hārūn al-Kindī al-Ramādi (d. 1012), was known by the name "Abū Janīsh" (from Spanish "ceniza" (=ash = ramad in Arabic); poet and scholar, worked in Cordoba. In medieval Europe he was known by the names "Josephus Sapiens" (Joseph the Sage) and "Josephus Ispanus" (Joseph of Spain).
See: GAL (I 270), IHS (I 672), KWA (II 410), KWA^2 (IV 569), MAA (79), MAA^2 (168), MAMS (II 201); al-Dabbī [1] (478), Ibn Bashkuwāl [1] (II 614).
M1. [Treatise on Multiplication and Division] - is mentioned by Herbert [1] (Pope Sylvester I) (101-102), see Weissenborn [4].

290. `ABDALLAH AL-THAQAFI

Abū Bakr `Abdallāh ibn Ḥusayn ibn Ibrāhīm ibn `Āṣim al-Thaqafī "Ibn al-Ghurbālī" (d. 1013), astronomer and linguist.
See: GAS (VII 359-360).
A1. Book on Anwā' and their Periods and on the Knowledge of Properties of Stars (Kitāb al-anwā' wa'l-azmina wa ma`rifat a`yān al-kawākib) - Istanbul (TK 3508). Description: GAS (VII 359-360). Facsimile edition of the manuscript: al-Thaqafī [1].

291. `ABDALLAH AL-HASIB

Abū Muḥammad `Abdallāh ibn `Alī al-Ḥāsib (10th c.), astronomer and reckoner (al-ḥāsib), worked in Bukhara. In "Chronology" (No 348, E1) al-Bīrūnī [2] (245) mentions his calendar reform. The treatises (No 194, M2-M3) of al-Khāzin are dedicated to him.
See: MAMS (III 364).

292. MUHAMMAD AL-SIJZI

Abū'l-Ḥusayn Muḥammad ibn `Abd al-Jalīl al-Sijzī [10-11th c.), mathematician; father and probably teacher of al-Sijzī (No 296).
Al-Sijzī wrote his treatise (No 296, M23) on properties of hyperboloids and paraboloids of revolution for him.

293. ABÙ'L-HASAN AL-SHAMSI AL-HARAWI

Abū'l-Ḥasan al-Shamsī al-Harawī (10-11th c.), mathematician from Herat.
See: Pingree [41] (EIr).
M1. [Treatise on the Trisection of Angle] - is mentioned in the work (No 296, M5) of al-Sijzī.

294. ABU'L-QASIM AL-QASRANI

Abū'l-Qāsim al-Qaṣrānī (or al-Qaṣrī) (d. 1022), astronomer and astrologer, worked in Baghdad at the court of Buyid sultans.
See: KF (284), KF^2 (41), MAA (80), MAMS (II 202), TH (429).

295. `ALI AL-NAYSABURI

Abu'l-Qasim `Alī ibn Ismā`īl al-Naysābūrī (10-11th c.), from Nishapur, mathematician.
See: GAS (V 386), MAMS (II 202).
M1. Revision of the "Elements" of Euclid (Taḥrīr al-Uṣūl li Uqlīdis) - Kayseri (Raşid 1230).

296. ABU SA`ID AL-SIJZI

Abū Sa`īd Aḥmad ibn Muḥammad ibn `Abd al-Jalīl al-Sijzī (al-Sijizī, or al-Sijī) (ca 950 - ca 1025), from Sijistan, son of Muhammad al-Sijzī (No 292). al-Bīrūnī [15] (56) in "Chronology" (No 348, E1) wrote that he personally heard from al-Sijzī the names of Persian months used in the ancient Sijistan. In his "Introduction to Geometry" (M2) al-Sijzī mentioned a planetarium constructed by him in Sijistan, see GAS, V 333. Al-Sijzī worked in Shiraz under Buyid Sultan `Aḍud al-Dawla. In "Geodesy" (No 348, G3) al-Bīrūnī [31] (68) describes his observation of a Solar eclipse together with al-Ṣūfī (No 212), Ghulām Zuḥal (No 217), Ibn Yumn (No 243), and al-Kūhī (No 277) in 969 in Shiraz. In "Astrolabes" (No 348, A5) al-Bīrūnī states that al-Sijzī had constructed many astrolabes.

See: GAL (I 246-247), GAL^2 (I 388-389), GAS (V 329-334, VI 224-226, VII 177-182, 333-334, 409-410), IHS (I 665), KZ (I 169, II 46, III 366, V 60), MAA (80-81), MAMS (II 202-208), SSM (42), STMI (291, 387), TH (230-232); Abdulla-zade [11], Berggren [10] (82-84), Dold-Samplonius [5] (DSB), [21] (ENWC), Kapp [1] (II 83-84), Qurbani [1] (250-268), Tuqan [1] (274).

M1. Introduction to Science of Geometry (al-Madkhal ilā `ilm al-handasa) - Dublin (Beatty 3652/1).

M2. Introduction to Geometry (Muqaddima fī'l-handasa) - Cairo (Taymūr riyāḍa 140/1, 2).

M3. Treatise on the Description of Conic Sections (Risāla fī waṣf al-quṭū` al-makhrūṭiyya) - Leiden (168/1). Edition of the fragments with French translation: Woepcke [7] (222-223), [17] (112-115). Research: Krasnova [1] (145-146), [3] (42-45). Description of the "perfect compass" of al-Kūhī (No 277, M8), called here "conical compass".

M4. Construction of the Heptagon Inscribed in a Circle and the Division of the Rectilinear Angle into Three Equal Parts (`Amal al-musabba` fī'l-dā'ira wa qismat al-zāwiya al-mustaqīmat al-khaṭṭayn bi-thalāthat aqsām mutasāwiyya) - Berlin (IGMN I. 18), Cairo (Fāḍil riyāḍa 41/16), Istanbul (SM Reşit 1191/9), Paris (4821). Edition, English translation, and research: Hogendijk [5] (238-239, 292-316). German translation: Schoy [29] (21-35).

M5. Book on the Construction of a Heptagon Inscribed in a Circle and Division of an Angle to Three Equal Parts (Maqālat al-`amal al-musabba` fī'l-dā'ira wa qismat al-zāwiya bi-thalāthat aqsām mutasāwiyya) - Oxford (143/27). Description: GAS (VII 109). Abridgement of the treatise M4.

M6. Treatise on the Division of Rectilinear Angle to Three Equal Parts (Risāla fī qismat al-zāwiyya al-mustaqīmat al-khaṭṭayn bi-thalāthat aqsām mutasāwiyya) - Leiden (168/2). Partial French translation by Woepcke: Khayyām [1] (117-124). 15 modes of trisection of an angle: by 1) Ibn Qurra (No 103, M20); 2) al-Harawī (No 293); 3-6) al-Bīrūnī (No 348, M2); by Archimedes; 8) al-Kūhī (No 277, M13); 9) al-Ṣaghānī (No 223, M2); 10) al-Sijzı; 11-14) al-Bīrūnī; 15) trisection of a right angle.

M7. Treatise on the Coordination of Twelwe Composed Ratios Related to Plane Figure of Secants (Risāla fī taḥṣīl īqā` al-nisba al-mu`allafa al-ithnay `ashara fī'l-shakl al-qaṭṭā ` al-musaṭṭaḥ) - Leiden (168/3). Research: Bürger and Kohl [1] (49-53), Khayretdinova [10]. Treatise on composed ratios containing proofs of 12 cases of the plane theorem of Menelaus.

M8. Treatise on the Figure of Secants (Risāla fī'l-shakl al-qaṭṭā `) - Lahore (Nabi Khan), Patna (2519/408). Edition: "al-Rasā'il al-mutafarriqa" [1] (No 10). Research: Berggren [4], Khayretdinova [9-10]. Proofs of 12 cases of the spherical theorem of Menelaus.

M9. Proofs of the Book of Euclid (Barāhīn kitāb Uqlīdis) - Dublin (Beatty 3652/2), Istanbul (SM Reşit 1191/10-16).

M10. Establishment of the Proofs of Some Propositions of the Book of Euclid (Thabt barāhīn ba`ḍ ashkāl kitāb Uqlīdis) - London (Ind. 734/14). Research: Khayretdinova [9].

M11. Treatise on Drawing Lines in Known Circles from Given Points (Risāla fī ikhrāj al-khuṭūṭ fī'l-dawā'ir al-mawḍū `a min al-nuqaṭ al-mu`ṭāt) - Paris (2458/1). French translation: L. Sédillot [3] (136-145).

M12. On Drawing Lines from an End of a Diameter of a Circle to the Perpendicular Dropped on the Line of Diameter (Fī ikhrāj al-khuṭūṭ min ṭaraf quṭr al-dā'ira ilā'l-`amūd al-wāqi` `alā khaṭṭ al-quṭr) - Dublin (Beatty 3652/10).

M13. On Drawing a Straight Line to Two Given Straight Lines (Fī istikhrāj khaṭṭ mustaqīm ilā'l-khaṭṭayn al-mustaqīmayn al-mafrūḍayn) - Dublin (Beatty 3652/3), Istanbul (SM Reşit 1191/21).

M14. On Drawing a Straight Line to the Given Line from a Given Point by Method of Analysis and Synthesis. Positions of Points, Counting Them, and the Slope of Angle (Fī ikhrāj khaṭṭ mustaqīm ilā khaṭṭ mu`ṭan min nuqṭa mu`ṭāt bi-ṭarīq al-taḥlīl wa'l-tarkīb wa wuqū` al-nuqaṭ wa ta`dīdihā wa iḥdāth al-zāwiya) - Dublin (Beatty 3652/9), Istanbul (SM Reşit 1191/8).

M15. On Properties of a Square [Built on] the Diameter of the Circle (Fī khawāṣṣ murabba` quṭr al-dā'ira) - Dublin (Beatty 3652/4).

M16. Correction of a Dubious Place in the Fourteenth Proposition of the Twelfth Book of "Elements" (Istidrāk al-shakk fī'l-shakl al-rābi` `ashar min al-maqāla al-thāniya `ashara min kitāb al-Uṣūl) - Dublin (Beatty 3652/5), Istanbul (SM Reşit 1191/17). Commentary on Proposition XII 14 of Euclid's "Elements".

M17. Treatise on the Solution of a Doubt in the Twenty Third Proposition (Risāla fī ḥall al-shakk fī'l-shakl al-thālith wa'l-`ishrīn) - Dublin (Beatty 3652/6), Istanbul (SM Reşit 1139/18). Treatise on Proposition I23 of Euclid's "Elements".

M18. Book on Selected Problems Which Were Currently Being Discussed by Him and the Geometers of Shiraz and Khurasan and His Annotations (Kitāb fī'l-masā'il al-mukhtāra allatī jarat baynahū wa bayna muhandisī Shirāz wa Khurāsān wa ta`līqātihī) - Dublin (Beatty 3652/7), Istanbul (SM Reşit 1139/2). Edition with English translation by Hogendijk and Persian translation by Bagheri: al-Sijzī [4]. Edition of fragments containing quotations of lost works of Apollonius with English translation: Hogengijk [9] (228-249). Research: Hogendijk [9], by Bagheri and Hogendijk - al-Sijzī [4], Hogendijk [38].

M19. Obtaining Definite Geometric Rules (Taḥṣīl al-qawānīn al-handasiyya al-maḥdūda) - Istanbul (SM Reşit 1191/6), Paris (2458/2). Description of the Paris manuscript: L. Sédillot [3] (139).

M20. Treatise on replies to Questions he was asked Concerning some Propositions of the Book "Lemmas" of Archimedes (Risāla fī jawāb `an al-masā'il allatī su'ila `anhā fī ba`ḍ al-ashkāl al-ma'khūdha min Kitāb al-ma`khūdhāt li-Arshimīdis) - Dublin (Beatty 3652/8), Paris (2458/3). Research: L. Sédillot [3] (116).

M21. Answers of Questions which Some Geometers of Shiraz Asked Him (Ajwiba `an masā'il saalahu `anhā ba`ḍ muhandisī Shīrāz) - Paris (2457/31).

M22. Book on Measurement of Spheres by Spheres (Kitāb fī misāḥat al-ukar bi'l-ukar) - Paris (2457/46). Edition: `Abd al-Latīf [1]. Russian translation by Rosenfeld and Safarov: al-Sijzī [3]. Research: Abd al-Latif [1], Rosenfeld and Safarov: al-Sijzī [3], Rosenfeld, Safarov, and Slavutin [1], Safarov [1]. Treatise contains 12 propositions including propositions of "corporal geometric algebra" equivalent to the formula $(a+b)^3 = a^3+3a^2b+3ab^2+b^3$ formulated by means cubes or spheres, which are generalizations of propositions of plane geometric algebra of Book II of Euclid's "Elements" and of Archimedes' "Lemmas", and further generalizations of these propositions for 4-dimensional spheres.

M23. Letter to Abū'l-Ḥusayn Muḥammad ibn `Abd al-Jalīl on Properties of a Solid Obtained by the Rotation of [an Ellipse] Hyperbola, and Parabola (Risāla ilā Abī'l-Ḥusayn Muḥammad ibn `Abd al-Jalīl fī khawāṣṣ al-shakl al-mujassam al-ḥadith min idārat al-qaṭ` al-zā'id wa'l-mukāfī') = Book on Properties of an Elliptic, Hyperbolic, and Parabolic Solid (Kitāb fī khawāṣṣ al-mujassam al-nāqiṣ wa'l-zā'id wa'l-mukāfī) - Istanbul (SM Reşit 1191/3), Paris (2457/28). The treatise is addressed to Muḥammad ibn `Abd al-Jalīl al-Sijzī (No 292), the author's father. Parabolic solids were defined by Ibn Qurra in (No 103, M11) as solids obtained from a segment of parabola bounded by a diameter and a chord conjugate with it by rotation around the diameter (in this treatise the volumes of these solids were found). The elliptic and hyperbolic solids are obtained analogously from the segments of ellipses and hyperbolas.

M24. Treatise on Properties of Hyperbolic and Parabolic Cupolas (Risāla fī khawāṣṣ al-qubba al-zā'ida wa'l-mukāfi'a) - Istanbul (SM Reşit 1191/4). Parabolic cupolas were defined by Ibn Qurra in the work (No 103, M11) as solids obtained from a same segment of parabola by rotation around the chord. The hyperbolic cupolas are obtained analogously from the segments of hyperbolas.

M25. Treatise on Answer to a Problem from the Book of Yuḥanna ibn Yūsuf on the Division of a Straight Line in Half and on Explanation of the Error of Yuḥanna in This Question (Risāla fī jawāb mas'ala `an kitāb Yūḥannā ibn Yūsuf fī inqisām khaṭṭ mustaqīm bi-niṣfayn wa tabyīn khaṭa' Yūḥannā fī dhālika) - Paris (2457/10). Discussion about the book (No 204, M4) of Yūḥannā ibn Yūsuf.

M26. Letter to Abū `Alī Naẓīf ibn Yumn al-Mutaṭabbib on the Construction of an Acute-angle Triangle from Two Different Straight Lines (Risāla ilā Abī `Alī Naẓīf ibn Yumn al-Mutaṭabbib fī `amal muthallath ḥādd al-zawāyā min khaṭṭayn mukhtalifayn) - Lahore (Nabi Khan), Paris (2457/27). Letter to Ibn Yumn (No 243).

M27. Treatise on the Property of Imagination of Two Lines Which Approach but Do Not Meet (Risāla fī kayfiyyat taṣawwur al-khaṭṭayn alladhayn yaqrubān wa lā yaltaqiyān) = Treatise on the Knowledge of Straight and Curved Lines (Risāla fī ma`rifat al-khaṭṭayn al-mustaqīm wa'l-munḥānī) - Cairo (riyāḍa 898/6), Dublin (Beatty 3562 - a fragment), Istanbul (SM Reşit 1191/7), Leiden (14/2), Mashhad (552/3), New York (Columb. 45/12). Edition with French translation by Rashed: al-Sijzī [2]. Research: Rashed [27]. Treatise on properties of asymptotes, commentary on Proposition II^{14} of "Conic Sections" of Apollonius.

M28. Treatise on the State of Two Lines, One of Which is Straight, and the Other is Hyperbola (Risāla fī amr al-khaṭṭayn alladhayn aḥaduhumā khaṭṭ mustaqīm wa'l-ākhar qaṭ` zā'id) - Leiden (14/6), New York (Columb. 45/11). Edition by `Awwad: al-Sijzī [1].

M29. Treatise on a Geometric Proof (Risāla fī'l-burhān al-handasī) - Istanbul (SM Carullah 2060/17).

M30. Properties of Heights in a Triangle (Khawāṣṣ al-a`mida fī'l-muthallath) - Dublin (Beatty 3652), Istanbul (SM Reşit 1191/20).

M31. Answer to Geometric Questions Asked by Geometers of Khurasan (Jawāb `an masā'il handasiyya su'ila `anhā bi-muhandisī Khurāsān) - Dublin (Beatty 3652/8), Istanbul (SM Reşit 1191/19). The treatise was written in 980. Description: Hogendijk [9] (194).

M32. Geometric Annotations (Ta`līqāt handasiyya) - Cairo (riyāḍa 699), Dublin (Beatty 3045/14), is mentioned also in M34 ("al-Rasā'il al-mutafarriqa" [1], Nos 8, 9). Abridgement of M18, does not contain quotations of the lost works of Apollonius (see Hogendijk [9], 193).

M33. Proof of a Problem from the Book of Archimedes not given by him (Burhān `alā mas`ala min kitāb Arshimīdis ghayr mā awradahū huwa) - Tehran (Univ. 1751/6).

M34. [Supplement to the Treatise that all Figures come from a Circle] - Patna (2486/41). Description of the manuscript: `Abd al-Ḥamīd [1] (91-92). Edition: "al-Rasā'il al-mutafarriqa" [1] (No 8) under the title of M45, ascribed to Naṣr al-`Azīzī (No 268). The authorship of al-Sijzī was established by Hogendijk [4] (146-147). Research: Hogendijk [4], Utseha [1].

M35. Book on Easier Ways to the Derivation of Geometric Propositions (Kitāb tashīl al-subul li-istikhrāj al-ashkāl al-handasiyya) - Lahore (Nabi Khan), the treatise is also mentioned in M34 ("al-Rasā'il al-mutafarriqa" [1], Nos 8, 10). Edition by Sa`idan: Ibn Sīnān [4] (339-372). Description by Hogendijk [9] (194). M34 informs that in this treatise the construction of a regular pentagon is considered.

M36. Book Explaining that the side [of a Square] is not Commensurable with [its] Diagonal (Risāla fī anna al-ḍil` ghayr mushārik li'l-quṭr) - Lahore (Nabi khan).

M37. Determining Two Mean Proportionals and Division of Rectilinear Angle into Three Equal Parts by Geometric Method (Istikhrāj al-muwassaṭayn wa qismat al-zāwiya al-mustaqīma bi-thalāthat aqsām mutasāwiyya bi-ṭarīq al-handasa) - Lahore (Nabi Khan).

M38. His Letter to a Friend on the Construction of an Isosceles Triangle on a Given Straight Line by the Perfect Method only by Means of the Introduction of the Book of Euclid, without Propositions (Risāla ilā ba`ḍ aṣdiqā'ihī fī istikhrāj `amal al-muthallath al-mutasāwī al-sāqayn `alā khaṭṭ mustaqīm mu`tān bi-ṭarīq kullī wa bi-muṣādarat kitāb Uqlīdis faqaṭ dūna al-ashkāl) - Lahore (Nabi Khan). The title is verified according to the list of the works of al-Sijzī. Dublin.

M39. Letter to his Friend on the Composed Ratio (Risāla ilā ba`ḍ aṣdiqā'ihī fī'l-nisba al-mu'allafa) - Lahore (Nabi Khan).

M40. Treatise on Answer to Numerical Problems by a General Method (Risāla fī'l-jawāb <`alā> masā'il `adadiyya `alā'l-ṭarīq al-kullī) - Lahore (Nabi Khan).

M41. Questions asked by a Measurer on a Problem and the answer of Ahmad al-Sijzī (Mas'ala sa'alahu <`anhā> ba`ḍ al-massāḥ wa jawābuhū) - Oxford (143/7).

M42. Treatise on Drawing a Hexagon Inscribed in a Square and a Square Circumscribed around a Hexagon (Risāla fī rasm al-musaddas fī'l-murabba` wa'l-murabba` `alā'l-musaddas) - Lahore (Nabi Khan).

M43. Book on Operation of a Proof by Conic Sections (Kitāb `amal al-burhān al-makhrūṭī) - is mentioned in M3.

M44. Book Called "Circles" (al-Kitāb al-mawsūm bi'l-dawā'ir) - is mentioned in M1.

M45. Treatise (Book) That All Figures Come from the Circle (Risāla (Kitāb) fī anna al-ashkāl kullahā min al-dā'ira) - is mentioned in M34 (see "al-Rasā'il al-mutafarriqa" [1], Nos 8, 3, 6).

M46. Book on Properties of egg-shaped and lentil-shaped Figures (Kitāb fī khawāṣṣ al-shakl al-bayḍī wa'l-`adasī) - is mentioned in M34 (see "al-Rasā'il al-mutafarriqa" [1] (No 8, 5), where it is said that in this treatise ellipsoids of revolution are considered, and in the lists of works of al-Sijzī in Dublin and Lahore.

M47. Letter to Abū Sahl Wayjan ibn Rustum al-Kūhī on Proof of Properties of a Conic Section Ellipse (Risāla ilā Abī Sahl Wayjan ibn Rustum al-Kūhī fī tabyīn khawāṣṣ al-qaṭ` al-nāqiṣ min quṭu` al-makhrūṭāt) = Treatise on Properties of an Ellipse (Risāla fī khawāṣṣ al-qaṭ` al-nāqiṣ) - is mentioned in M19 (see Qurbani [1], 263-264), also in the lists of works of al-Sijzī in Dublin and Lahore.

The lists of works of al-Sijzī in Dublin (Beatty 3562) and Lahore (Nabi Khan) also contain titles of his following works on mathematics:

M48. Letter to Abū `Umar ibn Muhammad ibn Isḥāq with Answer to an Interesting Question on the Multiplication of two Cubes from viewpoints of Geometry and Numbers (Risāla ilā Abī `Umar ibn Muḥammad ibn Isḥāq fī jawāb mas'ala ṭarīfa min ḍarb al-ka`bayn min jihatay al-handasa wa'l-`adad). Probably, this "interesting question" relates to geometric interpretation of a product of two cubes by means of multi-dimensional geometry.

M49. Treatise on Answer to a Numerical Problem on how to Find [Two Squares] whose Sum is a Square Number (Risāla fī'l-jawāb <`an> mas'ala `adadiyya wa hiya kayfa najidu [murabba`ayn] yakūnu majmū`uhumā huwā murabba`an). Treatise on Pythagorean triples.

M50. Book of Construction of Conical Compasses by the Method of Art (Risāla fī `amal al-birkār al-makhrūṭī bi-ṭarīq ṣinā`ī). Treatise on the construction of the instrument for drawing conic sections used in M3.

M51. Book on Cone, Sphere, and Cylinder (Kitāb fī'l-makhrūṭ wa'l-kura wa'l-usṭuwāna).

M52. Book on Drawing two Straight Lines from two given Points which Bound [Given] Angle and on Drawing Three [Straight] Lines from Three [Given] Points (Kitāb fī ikhrāj khaṭṭayn mustaqīmayn min nuqṭatayn mafrūḍatayn yuḥīṭān bi-zāwiya wa ikhrāj thalāthat khuṭūṭ min thalāthat nuqaṭ).

M53. Proof of the Book of Apollonius on Tangent Circles (Burhān kitāb Abulūnyus fī'l-dawā'ir al-mutamāssa). Commentary on Apollonius' book "On tangents" (now lost).

M54. [Treatise on a Premise of Archimedes] - is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1). German translation of these fragments: Suter [43] (16-17, 28-29). Russian translations of these fragments: Bulgakov - al-Bīrūnī [50] (36-37, 40), Krasnova and Karpova - al-Bīrūnī [23] (103-104, 106-107).

M55. Book on Triangles (Kitāb fī'l-muthallathāt) - is quoted in M18.

A1. Treatise on the Astrolabe (Risāla fī'l-asṭurlāb, Risālat al-asṭurlāb) - Mashhad (5286), Shiraz (Milli).

A2. Book on the Structure of Celestial Spheres (Kitāb tarkīb al-aflāk) = Treatise on Celestial Spheres (Risālat al-aflāk) - Istanbul (BU 4627/4; SM Laleli 2707; Univ. 371), Leiden (2541/1), Mashhad (7503), St. Petersburg (B 1791, 3692/3), Tehran (174/1). Description of the Istanbul manuscript: SHIM (469). Treatise is dedicated to Sultan `Aḍud al-Dawla.

A3. Book on the Meaning of Predictions of Stars (Kitāb al-ma`ānī fī aḥkām al-nujūm) - Istanbul (SM Aşir 570/10, Esat 1998/10, Hamid. 337/10), Tehran (174/10).

A4. Book of Zoroaster on Images of Degrees of Ecliptic (Kitāb Zarādusht <fī> ṣuwar darajāt al-falak) - Istanbul (NO 2800; SM Aşir 570/14, Esat 1998/14, Hamid. 837/13). Paris (6686/4). Description of the Istanbul manuscripts: SHIM (471-472).

A5. Book on the Positions of Planets in Twelwe Zodiacal Signs (Kitāb ḥulūl kawākib al-burūj al-ithnay `ashar) - Istanbul (SM Aşir 570/13, Esat 1990/13, Hamid. 837/12).

A6. Book of Introduction to the Science of Predictions of Stars (al-Kitāb al-madkhal ilā `ilm aḥkām al-nujūm) - Istanbul (SM Aşir 570/1, Esat 1998/1, Hamid. 837/1).

A7. Shah Collection on Stars (Jāmi`-i Shāhī fī'l-nujūm) P - Cairo (falak 3979/3, ḥurūf 79, mīqāt 887), Damascus (7794), Mashhad (6350), Tehran (Mu`tamid 117/8).

Concise exposition of principles of astronomy and astrology, probably, written for Buyid sultans who called themselves "shahinshahs" (shahs of shahs).

A8. Treatise on Properties of the Construction of Astronomical Instruments (Risāla fī kayfiyyat ṣan`at al-ālāt al-nujūmiyya) - Istanbul (TK 3342/8).

A9. On Properties of the Construction of All Astrolabes (Fī kayfiyyat ṣan`a jamī al-asṭurlāb) - Istanbul (TK 3342/9). Descriptions of the manuscript: SHIM (468-469), GAS (VI 225-226).

A10. Letter to Abū Muḥammad ibn `Alī al-Ḥāsib on the Use of crab-shaped Astrolabe (Risāla ilā Abī Muḥammad ibn `Alī al-Ḥāsib fī'l-`amal bi'l-asṭurlāb al-musarṭan) - Mashhad (5286).

A11. Book on Operation with Tympanum for [All] Horizons (Kitāb al-`amal bi'l-ṣafīḥa al-āfāqiyya) - Damascus (9255).

A12. Book on the Azimuth of Qibla (Risāla fī samt al-Qibla) - is mentioned in "Cartography" (No 348, M5) by al-Bīrūnī, see Ahmedov and Rosenfeld [2] (133).

A13. Book on Rules of Combinations of the Northern Astrolabe with the the Southern Astrolabe (Kitāb fī qawānīn mizājāt al-asṭurlāb al-shimālī ma'a al-janūbī) - is mentioned in "Astrolabes" (No 348, A5) by al-Bīrūnī, see GAS (VI 226).

A14. Book on Operations with the Astrolabe (Kitāb fī'l-'amal bi'l-asṭurlāb) - is quoted in "Shadows" (No 348, A4) by al-Bīrūnī [47] (93).

Al-Sijzī was also the author of many astrological works and descriptions within the Istanbul manuscripts: SHIM (469-471).

297. AHMAD IBN IBRAHIM AL-SANJARI

Aḥmad ibn Ibrāhīm al-Sanjarī (10-11th c.), astronomer. Sometimes his name was written as "al-Sijzī" (e.g. in GAS (V 333) and MAMS (II 204).

See: SSM (42).

M1. Introduction to the Construction of an Instrument for Measuring Distances. (Muqaddima li-ṣinā'at āla tu'raf bihā al-ab'ād) - Cairo (riyāḍa 898/5), Leiden (14/5), New York (Columb. 45/11). Description of an instrument for measuring celestial distances.

298. YA'QUB AL-SIJISTANI

Ya'qūb ibn Muḥammad al-Sijistānī (10-11th c.), mathematician from Sijistan.

See: GAL2 (I 387), GAS (V 313), MAMS (II 209), SSM (40).

M1. Knowledge of Measuring (Ma'rifat al-misāḥa) - Cairo (Taymūr riyāḍa 278/1). Treatise on surveying in 14 chapters.

299. ABU NASR IBN 'IRAQ

Abū Naṣr Manṣūr ibn 'Alī ibn 'Irāq al-Ja'dī (d. 1036) was born in Khwarizm, from the family of khwarizmshahs Afrigids, descendants of 'Iraq (Banū 'Irāq), from a sect of Manichaeans, founded by Ja'd ibn Dirham. He was the pupil of Abū'l-Wafā' (No 256) in Baghdad, worked in the old capital of Khwarizm Kath (now Biruni of Qara-Qalpaq autonomous region of Uzbekistan), in the new capital of Khwarizm Gurganj (now Urgench, the capital of Khwarizm region of Uzbekistan), and in Ghazna (now Ghaznin in Afghanistan). He was the teacher of al-Bīrūnī (No 348).

See: GAL (I 623), GAL2 (I 861-862), GAS (V 338-341, 357, VI 242 246), IHS (I 668), KZ (I 390, 846, II 478, III 366), MAA (186-187), MAMS (II 209-212), SSM (45), STMI (286-288, 387); Goldstein [6] (EI2), Kunitzsch and Lorch [1], Matviyevskaya and Tllashev [5], Pingree [46] (EIr), Samsó [2-3], [6] (DSB), Shafi [2], Siddykov [8] (28-32), U. Sultonov [3] (30-31), Tuqan [1] (271-272). Research: Matviyevskaya [41]

M1. Improvement of "Spherics" of Menelaus (Iṣlāḥ kitāb Manālāus fī'l-Kuriyyāt) - Leiden (930), Oxford (I 960), Patna (2468/10). Edition and German translation: Krause [2]. Research: Bürger and Kohl [1], Matviyevskaya and Tllashev [2, 4], Vogel [1], G. Yusupova [4-5].

M2. Treatise on the Resolution of a Doubt that Appeared in the Thirteenth Book of "Elements" (Risāla fī ḥall shubha 'araḍat lahu fī'l-maqāla al-thālitha 'ashara min kitāb al-Uṣūl) - Berlin (5925), Hyderabad (riyāḍa 327), Manisa (1706/13), Patna (2468/21), Tehran (Malik 3433/2). Edition: Ibn 'Iraq [1] (No 7).

M3. Treatise on Answer to Geometric Questions (Risāla fī jawāb masā'il al-handasa) - Manisa (1706/14), Patna (2468/19). Edition: Ibn 'Irāq [1] (No 10).

M4. Book on the Improvement of a Proposition of Menelaus in "Spherics" (Maqāla fī iṣlāḥ shakl Manālāus fī kuriyyāt) - Oxford (I 913, 940), Patna (2468/12). Edition: Ibn 'Irāq [1] (No 12). Spanish translation: Samsó [1] (134-150).

M5. Treatise on Drawing Circles of Azimuths on the Astrolabe (Risāla fī majāzāt dawā'ir al-sumūt fī'l-asṭurlāb) = Book of Azimuths (Kitāb al-sumūt) - Patna (2468/12) - under first title, is mentioned in "Spherics" (No 348, M7), "Astrolabes" (No 348, A5), and "List of Works" (No 348, HS1) by al-Bīrūnī - under the second (abridged) title. Since the quotations of al-Bīrūnī are absent in the Patna manuscript, this manuscript is not complete. Edition of the Patna manuscript: Ibn 'Irāq [1] (No 14). Spanish translation: Samsó [1] (89-104). Image of circles on celestial sphere on the plane of the astrolabe by circles in stereographical projection and by conics in "perfect projection" of al-Saghānī (No 223, A1). In "Spherics" al-Bīrūnī informs that in this treatise,

the first general proof of spherical Sine law was given, in "Astrolabes" al-Bīrūnī quotes the construction of hyperbola from this work of Ibn `Irāq.

M6. Treatise on the Knowledge of Celestial Arcs through others by a Method Different from the Method [Based on] the Knowledge of Figure of Secants and Composed Ratio (Risāla fī ma`rifat al-qisiy al-falakiyya ba`ḍuha min ba`ḍ bi-ṭarīq ghayr ṭarīq ma`rifatihā fī'l-shakl al-qaṭṭā ` wa'l-nisba al-mu'allafa) - Manisa (1706/16), Patna (2468/18). Edition: Ibn `Irāq [1] (No 8). German translation: Luckey [3]. Research: Khayretdinova [6].

M7. [Treatise on Plane and Spherical Sine Laws for Right-angled and Oblique-angled Triangles] - Leiden (168/15). German translation: Suter [31].

M8. Assertions of Euclid (Da`āwī Uqlīdis) - Hyderabad (riyāḍa 383).

M9. Mathematical Education (Tahdhīb al-ta`ālīm) - is mentioned in "Astrolabes" (No 348, A5) by al-Bīrūnī, see Wiedemann and Frank [3] (119). KZ (II 478) calls this work "Education of Talks and Operations" (Tahdhīb al-aqwāl wa'l-a`māl).

M10. [Treatise on the Construction of Heptagon] is mentioned in the algebraic treatise (No 420, M1) by al-Khayyām [26] (454-455).

M11. [Treatise on a Premise of Archimedes] - is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 13, 30-33). German translation of these fragments: Suter [43] (18, 21-22, 27-28). Russian translations of these fragments: by Bulgakov - al-Bīrūnī [50] (32, 39-40, 46), by Krasnova and Karpova - al-Bīrūnī [23] (98, 105-107).

A1. "Almagest" for Shah (al-Majisṭī al-shāhī). Extraction: in trigonometrical treatise (No 606, M13) by al-Ṭūsī [12] (153-156) containing the proof of spherical Sine law. Treatise was dedicated to Khwarizmshah.

A2. Determining the Distance between Two Centers from "Almagest" [for Shah] (Istikhrāj bu`d mā bayna'l-markazayn min al-Majisṭī) - London (Ind. 934/2).

A3. Book on the Spherical Shape of the Heaven (Kitāb fī kuriyyat al-samā) - Patna (2468/22 - incomplete). Edition of the Patna manuscript: Ibn `Irāq [1] (No 9).

A4. Treatise on Proofs of Operations of Ḥabash by the Table of Ephemerides (Risāla fī barāhīn a`māl Ḥabash a`māl Ḥabash bi-jadwal al-taqwīm) - Patna (2468/8). Edition: Ibn `Irāq [1] (No 4). Commentary on one of the Zījes of Ḥabash al-Ḥasib (No 46).

A5. Treatise on the Correction of a Slip of Abū Ja`far al-Khāzin in "Zīj of Tympanums" (Risāla fī taṣḥīḥ mā waqa`a li-Abī Ja`far al-Khāzin min al-sahw fī Zīj al-ṣafā'iḥ) - Patna (2468/9). Edition: Ibn `Irāq [1] (No 3). Research: Debarnot [1]. Critique of Zīj (No 194, A2) al-Khāzin. In this treatise the notion of polar triangle is introduced.

A6. Supplement to a Problem from "Zīj of Tympanums" (Istidrāk `alā mas'ala min Zīj al-ṣafā'ih) - Leiden (168/17). Supplement of al-Khāzin to the same Zīj (No 194, A2).

A7. Treatise on Table of Minutes (Risāla fī jadwal al-daqā'iq) - Oxford (I 940/6), Patna (2468/14). Edition of the Patna manuscript: Ibn `Irāq [1] (No 5). Research: Jensen [2].

A8. Treatise on Proofs of Operations of Muhammad al-Ṣabbāḥ on Examination of the Sun (Risāla fī'l-barāhīn `alā `amal Muḥammad ibn al-Ṣabbāḥ fī imtiḥān al-shams) - London (Ind. 734/2), Patna (2468/15). Edition: Ibn `Irāq [1] (No 2). Spanish translation: Samsó [1] (121-133). Commentary on the work (No 68, A4) of Muḥammad ibn al-Ṣabbāḥ.

A9. Treatise on Circles Restricting Temporal Hours (Risāla fī'l-dawā'ir allatī taḥuddu al-sā`āt al-zamāniyya) - Oxford (I 913, 940), Patna (2468/16). Edition: Ibn `Irāq [1] (No 1). Spanish translation: Samsó [1] (105-114). Research: Hogendijk [40].

A10. Treatise on Proof of Operations of Ḥabash on Ascension of Azimuth in his Zīj (Risāla fī'l-burhān `alā `amal Ḥabash fī maṭāli` al-samt fī zījihī) - Patna (2468/17). Edition: Ibn `Irāq [1] (No 11). Research: Kunitzsch and Lorch [1]

A11. Letter to Abū `Abdallah Muḥammad ibn `Alī al-Ma'muni on the Construction of the Astrolabe by a Method of Art (Risāla fī ṣan`at al-asṭurlāb bi'l-ṭarīq al-ṣinā`ī ilā Abī `Abdallāh Muḥammad ibn `Alī al-Ma'mūnī) - Berlin (5797), Patna (2468/13). Edition: Ibn `Irāq [1] (No 15). Spanish translation: Samsó [1] (75-88). Research: Tllashev and Ramazanova [1]

A12. Description of the Astrolabe (Ṣifat al-asṭurlāb) P - Tehran (Univ. Adab 241/2).

A13. Book of the Proof of the Correctness of a Question that Arose between Abū Ḥāmid al-Ṣaghānī and Two Astronomers of Rayy Who Contested [His] Construction of the Astrolabe (al-Maqāla fī'l-burhān `alā ḥaqīqat mas'ala waqa`at bayna Abī Ḥāmid al-Ṣaghānī wa bayna munajjimay al-Rayy fihā munāza`a wa-hiya fī `amal

al-asṭurlāb) - Patna (2468/11). Edition: Ibn `Irāq [1] (No 13). Spanish translation: Samsó [1] (115-120). Research: Tllashev and Ramazanova [1] (92-96). The substantiation of the position of al-Ṣaghānī (No 223) in this dispute.

A14. Treatise on the Disclosure of the Irrationality by means of which Batinites Determine the Appearance of the New Moon (Risāla fī kashf a`awār al-bāṭiniyya bi-mā huwa `ala `āmmatihim fī ru'yat al-ahilla) - Patna (2468/20). Edition: Ibn `Irāq [1] (No 6).

A15. Collection of Intermediate Treatises and Assertions of Euclid (Majmū`at rasā'il mutawassiṭāt wa da`awī Uqlīdis) - Hyderabad (riyāḍa 383).

"List of Works" (No 348, HS1) of al-Bīrūnī [7] (44) mentions following astronomical works of Ibn `Irāq:

A16. Book on the Cause of Mediation of Equation at Authors of "Sindhind" (Kitāb fī `illat tanṣīf al-ta`dīl `inda aṣḥāb al-Sindhind).

A17. Book on More Accuracy for the Book of Ibrāhīm ibn Sīnān on Explanation of Inequality of Higher Planets (Kitāb fī taṣḥīḥ kitāb Ibrāhīm ibn Sīnan fī taṣḥīḥ ikhtilāf al-kawākib al-`ulwiya). Commentary on the work (No 174, A5) of Ibrahim ibn Sinān.

A18. Book on the Azimuth of Qibla (Kitāb fī samt al-Qibla) - is mentioned in "Cartography" (No 348, M5) of al-Bīrūnī, see Ahmedov and Rosenfeld [2] (133).

A19. Treatise on the crab-shaped Astrolabe with Wings (Risāla fī'l-asṭurlāb al-saraṭānī al-mujannaḥ) - is mentioned in KZ. Treatise in 90 chapters.

300. DAWUD AL-`ALLAMI

Dāwūd Muljam al-`Allāmī (d. 1038), astrologer at the court of Buyid sultans in Iraq.

See. GAL^2 (I 862), MAMS (II 213).

A1. Treatise on the Determination of Hours and Days of Fortune and Misfortune (Risāla dar ma`rifat-i sā`āt wa sa`d wa naḥs-i ayyām) P - Mashhad (78).

301. MUHAMMAD AL-TABARI

Abū Ja`far Muḥammad ibn Ayyūb ibn Ḥāsib al-Ṭabarī (10-11th c.), from Tabaristan, mathematician and astronomer, worked in Rayy. MAA believes that (M2) was written in 1234/35 but it is the copying date of this work. Al-Bayhaqī [1] indicates that al-Tabari was older than al-Qabīsī (No 205) and younger than Ibn Labbān (No 308). He was the author of many astrological treatises.

See: GAL^2 (I 859-860), GAS (V 385-386, 404), MAA (144), MAMS (II 213-214, 311), PL (II 3-4, 43-44), SSM (51); al-Bayhaqī [1] (158), [5] (62-63).

M1. Book of Numbers (Shumār-nāma) P - Mashhad (6652). Edition by Khanlari with introduction and comments by Taqi Binash: M. b. A. al-Ṭabarī [1]. Research: Hermelink [8-9]. Book in 3 chapters: 1) Arithmetic of integers, 2) Arithmetics of fractions, 3) Arithmetic of astronomers (arithmetic of sexagesimal fractions).

M2. Key of Deals in Arithmetic (Miftāḥ al-mu`āmalāt fī'l-ḥisāb) P - Istanbul (SM AS 2763). Description of the manuscript: SHIM (492). Edition by Riyahi with introduction and comments by Taqi Binash: M. b. A. al-Ṭabarī [2]. Research: Hermelink [8]. 6 chapters: 1) proportional numbers, 2) multiplication, division, fractions, and roots, 3) inheritance and deals, 4) rarities and secrets, 5) "two errors", 6) measurement and geometry.

A1. Book on the Knowledge of the Astrolabe (Kitāb ma`rifat al-asṭurlāb) = Operations and Names in the Science of Astrolabe (al-`Amal wa'l-alqāb fī ma`rifat al-asṭurlāb) - Berlin (oct. 3386), Munich (347 - incomplete).

A2. Separate Zīj (Zīj-i mufrad) P - Caire (mīqāt 678), Cambridge (Browne 0. 1 - incomplete). Partial English translation and research: Kennedy and Hamadani-zade [1].

A3. On Premises for Choosing [Happy Days] according to Seven Planets (Dar miqaddamāt-i ikhtiyārāt bar sayāragan-i sab`a) P - St. Petersburg (Nat. 317/4).

A4. [Astrological Treatise] - Istanbul (SM Esat 3797/7), Leiden (1196). Treatise in 30 chapters.

A5. Determination in Search of [Duration of] Life and Haylaj (Istikhrāj dar ṭalab `amr wa haylāj) P - Tashkent (2292/2).

A6. Treatise on Rules of Knowledge. How Many Movements, Circular and Line Arcs and Points Are Used by Astronomers in Their Operations (Risāla-i qawā`id-i chand dar ma`rifat-i har harakatī u qisī u dā'irai u khaṭṭī u nuqtai ki munajjimān bar ān `amal kunand) P - Kapurthala.

302. AL-`ALA IBN SAHL

Abu Sa`d al-`Alā ibn Sahl (10-11th c.), mathematician, astronomer, and physicist.

See: GAL² (I 389), GAS (V 341-342, VI 232-233), MAA (82), MAA² (168), MAMS (II 214), SSM (46); Rashed [36], [50] (ENWC).

M1. On Properties of Three [Conic] Sections (Fī khawāṣṣ al-maqṭū`āt al-thalātha) - Paris (2457/29).

M2. Book on Limiting Lines (Kitāb fī khuṭūṭ al-taḥdīd) - is quoted in the work (No 296, M33) by al-Sijzī. Proof that for any point on a given hyperbola, the difference between the focal distances is constant.

A1. Commentary on "Book on the Construction of Astrolabe" (Sharḥ kitāb ṣan`at al-asṭurlāb) - Cairo (falak 898/13), Leiden (14/12). Commentary on the work (No 277, M7) of al-Kūhī.

Ph1. Proof that Celestial Sphere Is Not Extremely Transparent (al-Burhān `alā anna al-falak laysa fī ghāyat al-ṣafā) - Damascus (4871), Manisa (1706), Oxford (I 913, 940), St. Petersburg (B 1030/12). Description of the St. Petersburg manuscript: Rosen [1] (126).

Ph2. Treatise on the Burning Instrument (Risāla fī'l-āla al-muḥriqa) - Damascus (4871), Tehran (Milli 867). Research: Rashed [29].

Ph3. Book on Incomplete - Study of Ptolemy's Book on "Optics" (Kitāb fī taṣaffūḥ kitāb Baṭlamyūs fī'l-manāẓir) is mentioned on the title page of the manuscript (Paris 4821).

303. AHMAD AL-TUNAYZI

Abū'l-Qāsim Aḥmad ibn Muḥammad al-Ṭunayzī (ca 950 - ca 1025), from Cordoba, lived in Seville, died in Almeria; arithmetician also knowledgeable in inheritance.

See: MAA (82), MAMS (II 214-215); Ibn Bashkuwāl [1] (I 36), Tuqan [1] (266).

304. JA`FAR AL- HADRAMI

Abū Aḥmad Ja`far ibn Mufarraj ibn `Abdallāh al-Ḥaḍramī (born 969), from Seville, descendant of the natives of Hadramawt; physician and arithmetician.

See: MAA (82), MAMS (II 215); Ibn Bashkuwāl [1] (I 130).

305. `ALI AL-ZAHRAWI

Abū'l-Ḥasan `Alī ibn Sulaymān al-Zahrāwī (10-11th c.), physician, arithmetician and geometer; pupil of al-Majrīṭī (No 281).

See: GAS (V 355), MAA (82-83), MAMS (II 215), UA (II 40); al-Dabbī [1] (410), Ibn Bashkuwāl [1] (II 392), al-Maqqarī [2] (II 232), Tuqan [1] (345).

M1. Principles of [Knowledge on] Deals by the Method of Proof (al-Arkān fī'l-mu`āmalāt `alā ṭarīq al-burhān) - is mentioned in UA.

A1. Treatise on Knowledge of Ortive Amplitude without Determining Partial Declinations (Risāla fī ma`rifat si`at al-mashriq min ghayr istikhrāj al-muyūl al-juz`iyya) - Beirut (Greek. 364/7).

306. `ALI AL-HASHIMI

`Alī ibn Sulaymān al-Hāshimī (d. ca 1020), worked in Cairo under Fatimid Caliphs `Aziz and Ḥākim; physician, philosopher, mathematician, and astrologer.

See: GAL² (II 1020), GAS (273, VI 176), MAA (83), MAMS (II 215), UA (II 90), Ragep [5] (ENWC).

M1. Book on the Possibility of Divisibility that does not Cease and it is Impossible to Reach an Indivisible (Maqāla fī anna qubūl al-jism al-tajzī'a lā yaqif wa lā yantahī ilā mā yatajazza') - is mentioned in UA.

A1. Book on Difficulties in Zījes (Kitāb `ilal al-zījāt) - Oxford (I 879/4). English translation by Haddam, Kennedy and Pingree: al-Hashimi [1]. Research: GAS (VI 176); Id [1] (construction of analemma), Kennedy and Pingree: al-Hāshimī [1].

APh1. Enumeration of Doubts in Aristotle's Book on Sight and Enumeration of Doubts on Comets (Ta`dīd shukūk talzamu maqālat Arisṭūṭālis fī'l-baṣar wa ta`dīd shukūk fī kawākib al-dhanab) - is mentioned in UA.

307. AHMAD AL-MAZRUQI

Abū ʿAlī Aḥmad ibn Muḥammad ibn al-Ḥasan al-Mazrūqī (971-1030), philologist and astronomer.

See: GAS (VII 361-363, VIII 230-231).

A1. Book on Time and Places (Kitāb al-azmina wa'l-amkina) - Hyderabad (1516/28). Edition: al-Mazrūqī [1]. Description: GAS (VII 361-363).

308. KUSHYAR IBN LABBAN

Abū'l-Ḥasan Kushyār ibn Labbān ibn Bāshahrī al-Jīlī (ca 970 - ca 1030), born in Gilan; mathematician and astronomer.

See: GAL (I 252-253), GAL^2 (I 397-398), GAS (V 343-345, 404, VI 246-249, VII 182-183), IHS (I 717-718), KZ (I 199, III 563-564, 570, V 142, 405, 475, VI 51), MA (70-71), MAA (83), MAA^2 (163), MAMS (II 216-219, III 364), PL (II 42-43), SSM (45-46), STMI (284, 323), TH (97); Abdulla-zade [1, 3, 9, 19], Abdulla-zade and Sobirov [1], al-Bayhaqī [1] (192), [5] (62), Berggren [10] (31-36, 42-48), Jaouiche [5], Levey and Petruck [1] (3-6), Matviyevskaya and Tllashev [6] (14, 82-83), Mieli [2] (109-112), Qurbani [1] (169-194), Saidan [12] (DSB), Tuqan [1] (341), Yano [1], [2] (ENWC)

Research of mathemetical methods: Van Brummelen [2].

M1. Principles of Hindu Arithmetic (Fī uṣūl ḥisāb al-Hind) - Bombay (86), Istanbul (SM AS 4857/7). Facsimile edition of the Istanbul manuscript and English translation (with account of the Hebrew translation and commentary by Joseph Anabi who lived in Istanbul in 15th c.) by Levey and Petruck: Ibn Labbān [1]. Edition by Saidan: Ibn Labbān [2]. Research: Abdulla-zade [18], Levey and Petruck [1]. Work in 2 books: 1) On Simple, 9 chapters, 2) On Complicate, 14 chapters. In Book II sexagesimal system for fractions and integers (the numbers (a· 60) are called "raised", (a· 60^2)- "twice raised' etc., sexagesimal multiplication table, transformation from decimal system to sexagesimal and vice versa, extraction of roots, for cubic roots by the method coinciding with the Ruffini-Horner method used by Chinese in the 1st c. (see Luckey [5] and MA, 76).

M2. Sources of Principles in Arithmetic (ʿUyūn al-uṣūl fī'l-ḥisāb) = Sources of Principles in Hindu Arithmetic (ʿUyūn al-uṣūl fī'l-ḥisāb al-hindī) - Cairo (Fāḍil mīqāt farsi 8/3), Tehran (Univ. 2092). Facsimile edition of the Tehran manuscript: Qurbani [1] (183-194). Treatise in 12 chapters.

M3. Abstract Exposition of the Principles of Compositions of Sines [Tables] (Tajrīd uṣūl tarkīb al-juyūb) - Istanbul (SM Carullah 1499/3) - revision of the work (No 137, M1) of al-Battānī.

A1. Comprehensible and Mature Zīj (al-Zīj al-jāmiʿ wa'l-bāligh), sometimes called Comprehensible Zīj (al-Zīj al-jāmiʿ) and Mature Zīj (al-Zīj al-bāligh) - Alexandria (4285c)- Book III, Berlin (5751 - first half), Birmingham (1496 - part of Book IV), Cairo (mīqāt 188/2 -part of Book II, 400 - Books I-II, 691 - parts of Books I-II, anonymous, Fāḍil mīqāt 213/1 - Book I, Ṭalʿat riyāḍa 102/8 - Book IV), Istanbul (SM Fatih 3418/1, Vehbi 893, Yeni Cami 784/3; TK Revanköşk 1708), Leiden (8, 1021/3 - concise exposition, 1054), Tehran (6451; Univ. 510). Persian translation by ʿUmar al-Tabrizi of the Book I: Leiden (1056). Description of the Berlin manuscript: Ahlwardt [1] (203-206). Description of Istanbul manuscripts: SIAT (125). Edition of fragments: Ideler [2] (II 623-633). English translation of part IV on spherical trigonometry in the Leiden manuscript (1054): Berggren [11] (21-27). German translation of chronological chapter: Ideler [2] (II 623-633). German translation of introduction: Wiedemann [163]. French translation of geographical tables: Lelewel [1] (178-185). Research: on trigonometrical chapters - Berggren [11], R. Ibadov [1-2] - according to the anonymous manuscript Paris 5968, Schoy [23], ephemerides of planets - Abalakin a. o. [1], the table of fixed stars - Abdulla-zade [2], ecliptical coordinates of planets: Abdulla-zade and Zausayev [1-3], spherical geometry - Berggren [11], Research of the section on planetary motions - Van Brummelen [2]. Zīj contains 4 books: 1) Calculations, 2) Tables, 3) Astronomy, 4) Proofs. The anonymous treatise Paris 3342/1 informs that in Book IV the theorems of spherical trigonometry are exposed, see Khayretdinova [1] (452).

A2. Zīj of Kushyār al-Jīlī (Zīj Kushyār al-Jīlī) - Hyderabad (riyāḍa 305).

A3. Book on the Astrolabe and Properties of its Construction and its Use for Completion and Perfection (Kitāb al-asṭurlāb wa-kayfiyyat ʿamalihī wa iʿtibārihī ʿalā'l-tamām wa'l-kamāl) - Berlin (IGMN II 35), Bombay (86), Cairo (mīqāt 895/2, Fāḍil mīqāt 158/1, Azhar VI 305), Dublin (Beatty 5254), Istanbul (SM AS 2671/5, 2672/2, Selim. 730/2, Yeni Cami 784/4), Kabul (Maṭb.), London (298, 415/11), Mashhad (5529), Paris (2487/1, 5972), Princeton (Yehuda 1168, 4382), Qazimiya (Mahfuz 176), Tehran (Nasiri, Univ. 2092/1). Description of the Cairo manuscripts: Ruska and Hartner [1] (194-195). Research: Abdulla-zade [16].

A4. Guide on the Astrolabe (Irshād al-asṭurlāb) - Tehran (9).

A5. Knowledge of the Astrolabe (Ma`rifat al-asṭurlāb) = Treatise on the Knowledge of the Astrolabe (Risāla dar ma`rifat al-asṭurlāb) P - Tashkent (1640/2, 3894/1). Photo-reproduction of the last page of the manuscript 3894/1: SVR (XI 103).

A6. Treatise on the Astrolabe and Choice [of Days] (Risāla dar al-asṭurlāb ikhtiyārāt) P - Mashhad (6108).

A7. Treatise on the Construction of the Astrolabe (Risāla fī ṣan`at al-asṭurlāb) - Kabul (Maṭb. 27).

A8. Book of Introduction to the Art of Celestial Predictions of Stars (Kitāb al-Madkhal fī ṣinā`at aḥkām al-nujūm) = Introduction to the Principles of Predictions of Stars (Madkhal (Mujmal) al-uṣūl fī aḥkām al-nujūm) = Principle of the Art of Celestial Predictions (Aṣl ṣinā`at al-aḥkām al-falakiyya) - Alexandria (7), Beirut (211/2), Berlin (5884, oct. 3747), Birmingham (925-926, 1903), Cairo (falak 3774/1, 3934, 8531, mīqāt 120, 416, 683, 1040/6, Fāḍil mīqāt 7, 8, 9/1, 248/3, Ḥalīm mīqāt 11/4, Khalīl mīqāt 2, Kavala mīqāt 5, Ṭal`at mīqāt 75/1, 86, 222/1), Damascus (4700, 5265, 6218, 6229, 8234), Escorial (II 967/1), Istanbul (BU 4640/1, Veliyuddin 2286/2; NO 2951; SM AS 3498, 4840/2, 4857/6, Esat 2004, Fatih 3418, 3423, 3426/1, Hamid. 729/3, Selim. 741/1, Yeni Cami 1193/2; TK 3498, 7048, Revanköşk 1708), London (415/1), Mysore (I 105/16), Oxford (1543), Princeton (696; Yehuda 2799), Rampur (I 67), St. Petersburg (B 808), Tashkent (455/2, 1640/1), Tehran (2125, Univ. 3438). Persian translations: Dushanbe (IV 484/2), Mashhad (428, 489/2, Mawlawi), Oxford (1543), Navsari (Rana 92), Tehran (2153; Univ. 4492, Ilah. 428/1). Turkish translation by Mikhaliji (No 1352): Konya (745). Description of the Berlin manuscript oct. 3747: Wagner [1] (206-207). Description of the Escorial manuscript: Derenbourg [7] (127-128). Description of the Tashkent manuscript 1640/1: SVR (XI 167-168).

A9. Predictions of Stars (Aḥkām-i nujūm) P - Dushanbe (484/2).

A10. Treatise on Distances and Volumes (Risālat al-ab`ād wa'l-ajrām) - Patna (2468/6). Edition: "al-Rasā'il al-mutafarriqa" [1] (No 11). A chapter of the Zīj A1 in 13 chapters.

A11. Comprehensive Science of Astronomy (Fī `ilm al-hay`a al-jāmi`) - Moscow (154/1). A treatise on spherical astronomy.

A12. Science of Astronomy and Knowledge of its Properties (Fī `ilm al-hay'a wa ma`rifat kayfiyyatihī) - Moscow (154/2). Another treatise on spherical astronomy.

A13. Treatise (separate Chapter) on Totality of Definitions of Science of Astronomy (Risāla (al-Bāb al-mufrad) fī jawāmi` ta`rīfāt `ilm al-hay'a) - Cairo (Fāḍil mīqāt 158/2 - incomplete, anonymous), Princeton (Yehuda 373 - anonymous). The last chapter of Book III of the Zīj (A1). Treatise contains 135 definitions of terms of spherical astronomy.

A14. Improvement of the Equation of Mars (Iṣlāḥ ta`dīl al-Mirrīkh) - is mentioned by al-Bayhaqī [1] (158).

A15. Zīj of `Aḍud al-Dawla (Zīj-i `Aḍudī) P - is mentioned by al-`Allami [4] (II 7).

309. MUHAMMAD AL-KARAJI

Fakhr al-Dīn Abū Bakr Muḥammad ibn al-Ḥasan (or al-Ḥusayn) al-Karajī (d. ca 1025), born in Karaj, Iran, worked in Rayy and Isfahan as vizier at the court of Buyid Sultans Bahā' al-Dawla (998-1012) and Sultan al-Dawla (1012-1021). In some manuscripts, the name al Karajī is written with a dot over the letter "jim" instead of under it; where it is read as "al-Karkhī".

See: GAL (I 247), GAL^2 (I 389-390), GAS (V 325-329, VII 408-409), IHS (I 718-719), KWA (II 65), KWA^2 (III 279), KZ (III 63, IV 388, V 20, 475), MA (61-68, 107-108), MAA (84-85), MAMS (II 219-223, III 364), SSM (45), STMI (384); Anbuba [1], Berggren [10] (112-113), al-Daffa` [3], Levi della Vida [1], Matviyevskaya and Tllashev [6] (82), Qurbani [1] (269-283), Rashed [4], [7] (DSB), el-Sayed [1], Sesiano [27] (ENWC), Suter [44] (EI), Tuqan [1] (282-289), Vernet [23] (EI^2), Vernet and Catala [3].

Collection of Papers: "al-Karajī" [1].

M1. Sufficient [Book] on the Science of Arithmetic (al-Kāfī fī `ilm al-ḥisāb) - Alexandria (Fun. 21), Gotha (1474), Istanbul (SM Damat 855, Fatih 3439/21; TK 3135/1), Medina (`Arif Hikmat hisab 20), Rome (Vat. Sbath 111). German translation by Hochheim: al-Karajī [1], partial edition: Saidan [10] (368-400). Research: Amir-Moèz [1], Cantor [2] (I 718-719), el-Sayed [1-4], Wertheim [1]. Treatise in 70 chapters: 1- 43) arithmetic, 44-70) algebra.

M2. [Book] of Fakhr al-Mulk on the Art of Algebra and Almucabala (al-Fakhrī fī ṣinā`at al-jabr wa'l-muqābala) - Aligarh (Azad. Abd al-Hayy), Baghdad (5440), Bursa (Genel 1169/2), Cairo (Fāḍil riyāḍa 23), Hyderabad (Osm. 510), Istanbul (Köprülü 950; SM Esat 3517, Laleli 2714/2), Paris (2459), Tunis (Ahmad. 5464). French translation (incomplete): Woepcke [5]. Research: al-Dabbagh [8], Dosay [1], Matviyevskaya [5] (176-180), Qurbani [1] (284-315), Rosenfeld [35], el-Sayed [1-2], [4] (on negative numbers), Sesiano [3], Vogel [3].

Book is dedicated to Fakhr al-Mulk (d. 1016), vizier of Bahā' al-Dawla. Two parts: I) theoretical part in 15 chapters: 1-9) operations with polynomials, 10-11) summation of series, 13) linear and quadratic equations, 14] theory of indefinite equations solved by means of "induction" (istiqrā'), indeed by succective selection, 15) "rarities"; II) practical part in 5 chapters containing problems, many of them are from Diophantus' "Arithmetics".

M3. Wonderful in Arithmetic (al-Badī` fī'l-ḥisāb) - Rome (Vat. Barb. 36/1). Edition and French translation of the foreword by Anbuba: al-Karajī [2]. Edition and Italian translation of the fragments: Levi della Vida [1]. French translation of the foreword and Books III-V: Sesiano [4] (298-299, 351-374). Research: Anbuba [2], Levi della Vida [1] (263-264), Luckey [6], Matviyevskaya [5] (180-181), Sesiano [3], Shawky [6].

M4. Causes of Calculus of Algebra and Almucabala (`Ilal ḥisāb al-jabr wa'l-muqābala) - Ankara (Saib 5311/6), Diyarbakır (2213), Istanbul (SM Hüsrev 457/7), Oxford (I 986/3). Research: el-Sayed [1]. Treatise on quadratic equations.

M5. Book on Roots (Kitāb al-ajdhār) - Bursa (Genel 1169/3), Tehran (Univ. 361/4). Research: GAS (V 328);

M6. Questions and Answers in Arithmetic (al-Masā'il wa'l-ajwiba fī'l-ḥisāb) - Paris (4441).

M7. Treatise on Two Errors (Risāla fī'l-khaṭā'ayn) = Light on Two Errors of Calculus (Lum`a fī hisāb al-khaṭā'ayn) - Diyarbakır (2313/6) - under the second title; Tehran (6430) - under the first title.

M8. Concise [Book] on Arithmetic and Geometry (Mukhtaṣar fī'l-ḥisāb wa'l-misāḥa) - Alexandria (Fun. 82/4).

M9. Book on Measurement (al-Kitāb al-muqni` fī'l-misāḥa) - Cairo (riyāḍa 1098).

M10. Comprehensive [Book] on Arithmetic (al-Kitāb al-muḥīṭ fī'l-ḥisāb) - Bukhara (24), St. Petersburg (B 2139/3). Description of the St. Petersburg manuscript: ARIV (I 452). Description of the Bukhara manuscript: Abrarova [1]. Research: GAS (VII 409); Abrarova [2-6]. Book in 5 chapters: 1) arithmetic of fractions, 2) measurement, 3) algebra, 4) problems solved by algebra, 5) operations with parts of a sphere. In the Bukhara manuscript the 5^{th} chapter is absent.

M11. Book on Hindu Arithmetic (Kitāb fī ḥisāb al-Hind) - Alexandria (fun. 22).

M12. Art of Arithmetic (Ṣinā`a al-ḥisāb) - is quoted by al-Karajī in M6 (f. 5, 216).

M13. [Commentary on Comprehensive [Book] on Arithmetic] - is mentioned in the foreword to M8 and in chapter III of this book where after the exposition of square and cube of a binomial it is said that the general rule will be exposed in the commentary on this book. Apparently, this treatise is also quoted in the work (No 487, M1) of al-Samaw`al who ascribes to al-Karajī the general binomial formula $(a+b)^n = a^n + na^{n-1}b + \ldots + C_n^m a^{n-m} b^m + \ldots + nab^{n-1} + b^n$ for any natural (n) and the rule , see Rosenfeld [19] (141-142).

M14. Book on Induction (Kitāb fī'l-istiqrā`) - is mentioned by Anbuba [1]. Apparently, this book is devoted to indefinite equations solved by successive selection (chapter 14 of Part I of M2 or its development).

M15. Book of Rarities of Figures (Kitāb nawādir al-ashkāl) - is mentioned by Anbuba [1] (= chapter 15 of Part I of M2 or its development).

M16. Book on Circulations and Inheritances (Kitāb al-dawr wa'l-waṣāyā) - is mentioned by Anbuba [1].

M17. Sufficient Book on Measurement (al-Kitāb al-muqni` fī'l-misāḥa) - Cairo (riyāḍa 1098).

A1. Introduction to the Science of Stars (al-Madkhal fī `ilm al-nujūm) - is mentioned in KZ (II 489).

Me1. Book of Finding Hidden Waters (Kitāb inbāṭ al-miyāh al-khafiya) - Hyderabad (I 128), Patna (2468/32). Edition: al-Karajī [3]. French translation by Mazaheri: al-Karajī [5]. English translation of 26-30 chapters and their research: Bruin [1]. Persian translation by Hidiw Jam: al-Karajī [4]. Research: Bruin [2], Kushakova [1], Nadji [1], Rozhanskaya [8] (133-136). Treatise on practical mechanics and hydromechanics in 30 chapters.

Me2. Book of Vaults of Buildings (Kitāb `uqūd al-abniya) - is mentioned in the encyclopaedic treatise of al-Akfānī (No 703, E1), [1] (108).

310. ASBAGH IBN AL-SAMH

Abu'l-Qāsim Aṣbagh ibn Muḥammad ibn al-Samḥ al-Gharnāṭī (984-1035), physician and astronomer, worked in Granada.

See: GAL (I 623), GAL^2 (I 861), GAS (V 356, VI 249), IHS (I 715), KZ (II 493, III 557, 620, V 20-21, 40-41, 172, 473, 620), MAA (85), MAA^2 (168-169), MAA^3 (171), MAMS (II 223-224), UA (II 39-40); al-Andalusi [1] (69-70), Kapp [1] (II 84), al-Maqqarī [1] (II 232), Pingree [11] (EI^2), Rashed [42], Samsó [17], Tuqan [1] (336).

M1. Sufficient Arithmetic on the Atmosphere (al-Kāfī fi'l-ḥisāb al-hawā'ī) - Berlin (6010 -incomplete), Escorial (II 973/1). Description of the Berlin manuscript: Ahlwardt [1] (161). Description of the Escorial manuscript: Derenbourg [7] (124-125). Treatise on finger arithmetic.

M2. Perfect Arithmetic on the Atmosphere (al-Kāmil fi'l-ḥisāb al-hawā'ī) - is mentioned by KZ (V 21) as a book that differs from M1; it is also mentioned in KZ (V 20).

KZ (V 172, 473) and UA also mentions mathematical works of Ibn Samḥ:

M3. Book of Introduction to Geometry on the Commentary of the Book of Euclid (Kitāb al-Madkhal ila'l-handasa fi tafsīr kitāb Uqlīdis).

M4. Great Book on Geometry where Cases of Straight, Curved, and Broken Lines Are Investigated (al-Kitāb al-kabīr fi'l-handasa taqaṣṣā fīhi ajzā'an min al-khaṭṭ al-mustaqīm wa'l-muqawwas wa'l-munḥanī). Research of Hebrew translation of a fragment on cylinder and its plane sections by Levy: Rashed [42] (929-973)

M5. Book of Fruits [of the Science on] Number Known as [Book on] Deals (Kitāb thimār al-`adad al-ma`rūf bi'l-mu`āmalāt) = Book on Deals (Kitāb al-mu`āmalāt).

M6. Book on the Nature of Numbers (Kitāb ṭabī`at al-`adad).

A1. Book on the Construction of the Astrolabe (Kitāb fi'l-`amal bi'l-asṭurlāb) - Escorial (II 972/4), London (Sup. 9602/2). Description of the Escorial manuscript: Derenbourg [7] (122-123). Research: Viladrich [2-3].

A2. Book of Definitions of the Type of Constructions of the Astrolabe (Kitāb al-ta`rīf bi-ṣūrat ṣan`at al-asṭurlāb) - is mentioned in KZ (V 40-41) and UA.

A3. Zīj according to the Indian Method (Zīj fi'l-ṭarīq al-hindī) - is mentioned in KZ (VII 557).

A4. [Treatise on the Planetarium]. The medieval Spanish revision containing the table of apogees on planets for 1025: Alfonso X [1] (III 241-271).

A5. [Abridgement of "Almagest"] - is mentioned in the work (No 771, H1) of Ibn Khaldūn [1] (III 135).

Ph1. [Commentary on Revision of "Physics" of Aristotle] by Alexander of Aphrodisias - is mentioned in KZ (V 620).

311. `ABDALLAH IBN AL-SHIQAQ

Abū Muḥammad `Abdallāh ibn Sa`īd ibn `Abdallāh al-Umawī (954-1035) from Cordoba, known by the name "Ibn al-Shiqāq"; he was a mufti and a witty reckoner.

See: MAA (85), MAMS (II 224-225); Ibn Bashkuwāl [1] (I 261).

312. AHMAD IBN AL-SAFFAR AL-GHAFIQI

Abū'l-Qāsim Aḥmad ibn `Abdallāh ibn `Umar al-Ghāfiqī (d. 1035), known as "Ibn al-Ṣaffār" (son of a coppersmith), from Cordoba, astronomer and mathematician, pupil of al-Majrīṭī (No 281), died in Denia.

See: GAL (I 224), GAL^2 (I 401-402), GAS (V 356-357, VI 250-251), IHS (I 716), MAA (86), MAA^2 (169), MAMS (II 225-226), SSM (46), UA (II 40); Castells and Samsó [1], Ibn Bashkuwāl [1] (I 45), al-Maqqarī [1] (II 232), Steinschneider [14] (580-584), Tuqan [1] (342).

M1. [Mathematical Treatise] - is mentioned by Casiri [1] (II 140).

A1. Treatise on Operations with the Astrolabe (Risālat al-`amal bi'l-asṭurlāb) = Book on the Use of the Astrolabe and Description of its Instruments and Parts (Kitāb al-`amal bi'l-asṭurlāb wa dhikr ālātihī wa ajzā'ihī) - Cairo (mīqāt 639/8, 928, Taymūr riyāḍa 163/1), Escorial (II 964/1), London (Sup. 9600/8, 22672), Rabat (358/4, Cattani 991/5), Tunis (Ahmad. 5547, Sadiq. 2843). Description of the Escorial manuscript: Derenbourg [7] (102-103). Research: GAS (VI 250-251).

A2. Treatise on the Astrolabe (Risāla fi'l-asṭurlāb) - Cairo (mīqāt 175).

A3. Concise Zīj According to the Model of "Sindhind" (al-Zīj al-mukhtaṣar `alā ṭarīq al-Sindhind) - Paris (Hebr. 1102 - only seven chapters) - Arabic in Hebrew script. Transcription of the Paris manuscript in Arabic script: Castells and Samsó [1] (252-262). Photo-reproduction of the first two pages of the manuscript: Castells and Samsó [1] (248-249). English translation and research: Castells and Samsó [1] (229-247).

A4. Chapter on the Construction of a Plate by Means of which the True Hours of the Day are Determined (Bāb fī `amal balāṭa yu`rafu bihā sā`āt al-nahār `alā al-ḥaqīqa) - Florence (152/2). Treatise on the construction of sundials.

A5. Chapter on Determining the Meridian (Bāb fī ma`rifat khaṭṭ niṣf al-nahār) - Florence (152/3).

A6. Altitude of the Sun during its Entry into Zodiacal Signs at Cordoba (Irtifā` al-shams `inda ḥulūliha bi-ru'ūs al-burūj bi-Qurṭuba) - Florence (152/4).

A7. Chapter on Determination of the Azimuth of Qibla at the city of Cordoba (Bāb fī ma`rifat samt al-Qibla [bi-madī]nat Qurṭuba) - Florence (152/5).

In the manuscripts of A5-A7 the name of the author is not indicated, the autorship of Ghāfiqī was established on their similarity with the manuscript of A4 by Sabra [19] (280-281).

313. MUHAMMAD AL-GHAFIQI

Muḥammad ibn Aḥmad ibn `Abdallāh al-Ghāfiqī, probably son of al Saffar al- Ghāfiqī (No 312).

See: MAMS (II 226).

A1. Treatise on the Astrolabe and the Names written on it (Risālat al-asṭurlāb wa'l-asmā al-waqi`a `alayhī) - Istanbul (SM Yaḥyā 244/10), London (976).

314. `ALI AL-JAWHARI

`Alam al-Dīn Abū'l-Ḥasan `Alī ibn Ismā`īl al-Jawharī (10-11th c.) from Baghdad, was known by the name "al-Rakkāb Ṣālār" (cavalry leader), probably son of the well-known grammarian Abū Naṣr Ismā`īl ibn Ḥammād al-Jawharī (d. 1002) from Jawhar near Farab, now in Southern Kazakhstan; mathematician and constructor of astronomical instruments.

See: MAA (195), MAMS (II 226), TH [1] (236-237).

315. ABU MUHAMMAD AL-`ADLI AL-QAINI

Abū Muḥammad al-`Adlī al-Qāinī (before the middle of 11th c.) from Qain; man of letters and geometer.

See: GAS (V 386-387), MAMS (II 226); al-Bayhaqī [1] (81-82), [5] (61), Tuqan [1] (266).

Information on his works by Al-Bayhaqı:

M1. Book on Measurement (Kitāb fī'l-misāḥa).

M2. Book on Algebra and Almucabala (Kitāb al-jabr wa'l-muqābala).

A1. Zīj of `Adli (al-Zīj al-`Adlī).

A2. Improvement on the Zīj of al-Battānī (Tahdhīb Zīj al-Battānī). Revision of Zīj (No 137, A1) of al- Battānī.

316. KHALAF IBN HAYYAN

Abū'l-Qāsim Khalaf ibn Ḥusayn ibn Marwān ibn Ḥayyān (948-1036) from Cordoba, Ibn Abī `āmir's military cryptographer; arithmetician and geometer; father of Abū Marwān Ḥayyān ibn Khalaf, the famous historian.

See: MAA (86), MAMS (II 226); Ibn al-Abbār [1] (I 197).

317. ABU `ALI IBN SINA

Abū `Alī al-Ḥusayn ibn `Abdallāh ibn Sīnā (980-1037), the great physician and philosopher, known in Europe as "Avicenna"; was born in Afshana near Bukhara, worked in Bukhara at the court of the Samanid Amir Nuh ibn Mansur (976-996); after the conquest of Mawerannahr by nomad Qarakhanids, he worked in Gurgan at the court of Ziyarid Sultan Qābūs ibn Wushmagir (978-1012) and in Gurganj at the court of Khwarizmshah al-Ma'mūn (1009-1017); after the conquest of Khwarizm by Maḥmūd Ghaznawī (998-1030), he worked in Hamadhan at the court of Buyid Sultan Shams al-Dawla (997-1021) and at the court of Kakuid Sultan `Alā' al-Dawla (1008-1041) in Isfahan. He died in Hamadhan.

See: GAL (I 589-599), GAL² (I 812-828), GAS (V 108, VI 276-280, VII 292-302), HD (349), HD² (299), HMA (I 455-467), IHS (709-713), KWA (I 152), KWA² (I 440), KZ (I 160, 202, 227, 246, 270, 301, 303, 308, 463, 493, II 41, 244, 251, 298, 365, 367, 386, 464, III 4, 77, 86, 92, 98-99, 104, 185, 197, 231, 246, 267, 354, 359, 361, 367-368, 375-376, 390, 393, 408, 412, 416, 418-421, 423, 439, 442-443, 447, 450-451, 457-458, 647, IV 62, 129, 156, 175, 290, 310, 495-496, 517, 543, V 38, 69, 104, 129, 138, 143-145, 163, 236, 259, 270, 279, 312, 435, 484, VI 33, 52, 68, 253, 303, 478), MAA (86-90), MAA² (169), MAMS (II 227-236), PI (18-42), PL (II 3, 43, 347-348, 435-437, 445), SSM (49), STMI (4-5, 431, 469-471, 599, 601), TH (413-426), UA (I 215-220, II 2-20); A. Abdullayev [1], Abdulla-zade [5], Abed a. o. [1] (EIr), Abū'l-Fidā [1] (III 93), Afnan [1], Ahadova [9], al-Ahwānī [2], Alimardanov and Dadalishiyev [1], d'Alverny [1-4], Amid [2], Aminrazavi [1] (ENWC), Anawati [1-2], Anawati and Iskandar [2] (DSB), al-`Aqqād [1], Arberry [1, 3], Arnaldez [4], Asimov [3, 5], Asimov and Dinorshoyev [1], Asimov and Yaroshevskiy [1], Ashurov [4], Ashurov and

Devonaqulov [1], Ashurov and Dinorshoyev [1], Asmus [1], S. Ayni [1], K. Babayev [1], Barani [5], Baratov [1-4], al-Bayhaqī [5] (43-55), Belenitskiy [9], de Boer [3] (119-132), [7] (EI), Bogdanov [1], Bogoutdinov [1-2, 4], Boltayev [1] (19-185), [2-4], Borisov [1], Braginskiy [1], B. Brentjes [1], Brentjes and Brentjes [1-2], Breydo [1], Browne [3] (II 106-111), Bulgakov [20, 22], Carra de Vaux [9], Charyyev [1-3], Chkheidze and Giunashvili [1], Crombie [1], Czerminski [1], Dinorshoyev [4], Dobrovol'skiy and Abdulla-zade [1], Ergin [1], Faktorovich [1], Farmer [5] (36-37), Farrukh [1], Fayzullayev [10], Foster [1], G. Gabrieli [3], Gardet [1-2], Gawharin [1], Goichon [1-3], [5] (EI²), F. Gökmen [1], Goodman [1], S. Grigorian [1], Hamarneh [5] (GAC), Hana [2] (GWG), Hoshim [1], Humai [2], Ignatenko [7] (123-150), Ihsanoğlu [13], Irisov [6, 11], Izmaylova [1], Jolivet and Rashed [2], Kapp [1] (II 84-86), Janmatova [5], U. Karimov [1, 3], Y. al-Kashi [1], Khayretdinova [4], Khayrullayev [16, 18], Khayrullayev and Boltayev [1], Khayrullayev and Zahidov [1], Khurshut [1-2], Krafft [2] (GWG), Ley [1], Madkour [1], Mahdawi [1], Mansur [1], Marupov [1, 4-5, 7-8], Massignon [4], Matviyevskaya [28], Mehren [3-5], Mieli [2] (102-105), Mirbabayev [1], Mirzoyev [1], Musa [1], Naficy [3, 5], Nasr [1-2, 11a], Olimov [1], Petrov [1-4], Pines [8], Pines and Suler [1] (EJ), Pulatov [1], A. A. Qadyrov [1-3], Qadyrov and Saipov [3], Qary-Niyazov [3], Quadri [2] (95-121), Qurbani [1] (316-322), U. Rajabov [1], Rashed [25a], Raynov [1], Remondon [1], Rempis [1], M. Renaud [1], Romodin [1], Röcker [1], Rosenfeld [31-33], Rozhanskaya [11-12], Ruska [22-23], A. S. Sadyqov [2-3], Safa [1], Saghadeyev [7-8], Salibi [2], Sayfullayev [1-3], Sayılı [18] (156-158), [30-31], Semyonov [4], Shad [1-2], Shah [1], Shermuhammadov [1], Shidfar [1], Sirajdinov and Ahmedov [2-3], Sirajdinov, Matviyevskaya, and Ahmedov [5-6], Sirajev [1-2], Skladanek [1], Sokolovskaya [1], Stabile [1] (SeT), Strohmaier [5], Subiran [1], Suchkova [1], M. Sultanov [2], U. Sultonov [1-2], Taqdisi and Aliyev [1], Teicher [1], Ternovskiy [1, 3], Tirmizi [1], Troilo [1], Tuqan [1] (322-334), al-Turayhi [1], Ülken [4] (200-301), [7] (IA), Ueberweg [1] (307-310), Urunbayev and Usmanov [3], Urunbayev and Vahabova [1], Vahabova [1-2], Vilaseca [1], Wasty [1], Wickens [1], H. Winter [2], Wöhler [1], Yakubovskiy [1-3], Sh. Yuldashev [1], A. Zahidov [1], V. Zahidov [6], [7] (51-69), Zakuyev [2-3], Zavadovskiy [1-6], Zikrillayev [3, 9-10].

Memorial collections: "Ibn Sīnā" [1-17].

HS1. History of Sheikh al-Ra'īs, Proof of Truth, Abū `Alī al-Ḥusayn ibn `Abdallah Ibn Sīnā (Ta'rīkh al-Sheikh al-Ra'īs Ḥujjat al-Ḥaqq Abī `Alī al-Ḥusayn ibn `Abdallāh ibn Sīnā) - autobiography of Ibn Sīnā finished by his pupil al-Juzjānī (No 318, HS1). Research: Bertolacci [1].

E1. Book of Healing [of the Soul from Ignorance] (Kitāb al-shifā') - Aligarh (Azad Jawahir 471; Subh. 110/4, 30, 40, 53, 57, Sup. 110/56, Univ. 3), Berlin (5044), Cairo (hay'a 72, Taymur 140; Azhar 331), Calcutta (Buhar 284, 315), Damascus (80/16, 8656), Hyderabad (falsafa 391, jadid 3092; Osm. 696-697; Salar falsafa 75-79, 98), Istanbul (Atıf 1565, 1596-1597; BU 3966-3967, 3969, 4288; Köprülü 894; Millet, Feyzullah 1206-1209; NO 2708-2711; Ragıp 1461; SM Aşir 207, AS 2389, 2441-2442, 2720, Beşir 101, Carullah 1424-1426, 1332/1, 1333, Damat 822-825, Hakim 857, Halet 513-514, Hamid. 795-796, Husrev 206, Kılıç 673, Laleli 2546, 2550, Vehbi 1401, Yeni Cami 208, 770-773; TK 3261-3263, 3445, 3473), Kabul (King 4626), Leiden (4, 84), London (Sup. 484, 711; Ind. 474-476; Ross 114), Mosul (189/16), Oxford (I 281, 435-437, 452, 467-468, 471-473, 475-477, 481-483, 485-487, 490, 495, 581, 813), Paris (2484), Patna (213, 523, 904-906, 2223-2226, 2822), Rampur (112), Tehran (Milli 580; Mu`tamid 204; Sipahsalar 1438-1439, 8331; Univ. 243).

Editions: Ibn Sīnā [5, 10], edition of the part on logic: Ibn Sīnā [23], edition of the part on mathematics (geometry, astronomy, arithmetics, music): Ibn Sīnā [38], edition of the part on physics and psychology: Ibn Sīnā [50], edition of the part on metaphysics: Ibn Sīnā [47] (the editions [23], [38], [50], and [47] compose the complete edition of this work). Edition of the chapter on psychology: Ibn Sīnā [45]. French translation by Anawati with introduction, notes, and commentary: Ibn Sīnā [60a]. German translation of the part on metaphysics: Horten [2]. French translation of medieval Latin translation of the part on metaphysics by Van Riet: Ibn Sīnā [69]. Polish translation of the part on metaphysics by Gojacz: Ibn Sīnā [57]. Latin translation of the chapter on psychology: Ibn Sīnā [54]. French translation of the chapter on psychology by Bakoμ: Ibn Sīnā [37]. French translation of medieval Latin translation of the part on psychology by Van Riet: Ibn Sīnā [54]. English translation of the chapter on logic: Shehabi [1]. English translation of the chapter on mineralogy by Holmyard and Mandeville: Ibn Sīnā [15], French translation of a part of arithmetic chapter: Woepcke [14] (502-504). German translation of the introduction to the chapter on astronomy: Wiedemann [80] (226-227). French translation of the chapter on music: d'Erlanger [1] (II 105-245). German translations of chapters on rainbow and sight: Horten [8], Wiedemann [143]. French translation of partial medieval Latin translation of the part on physics by Van Riet: Ibn Sīnā [71]. Persian translation of the chapter on physics by Furughi: Ibn Sīnā [18], Tajiki transcription of the three first chapters of this translation: Ibn Sīnā [67] (III 19-406). Russian translation of chapter on geology by Belenitskiy: Ibn Sīnā [42]. Russian translations of chapter on music by Saghadeyev: Ibn Sīnā [53], chapters on mineralogy and psychology: Ibn Sīnā [48]. Research: Asimov [4], Ehlers [1], Mahdawi [1] (125-184), part on metaphysics - Cruz Fernandez [1], Salibi [1], theory of emanation -

Nasrat [1], part on logic - Amid [1], Birkenmajer [1], Boltayev [1], Shehabi [1], part on psychology - Gätje [1-2], Hall [2], Landauer [1], Siyasi [1], Zakuyev [3], part on mathematics - S. Ahmad and Ansari [1], A. Ahmedov [12], Inoghomjonova [1], Jalalov [13], Lokotsch [1], Muhammediyev [1], Sabra [23], Sayılı [29, 32], Sharipova [1-3, 5], part on astronomy - A. Ahmedov [14], part on physics - Kolpakov [1], Shayegan [1], part on psychology: Federici Vesconsini [1] (77-88), research of part on physics - Hasnawi [1].

Abridgement of the "Second Doctrine" of al-Fārābī (No 180, E1) in 4 parts: 1) Logic, 2) Natural sciences (physics, biology, psychology), 3) Mathematics (geometry, astronomy, arithmetic, music), 4) Metaphysics, total in 18 chapters. Chapters of Part III: "Abridged Euclid", "Abridged Almagest", "Abridged Book of Arithmetic", and "Science of Music", 2nd and 4th from these chapters are abridgements of (No 180, A1 and Mu1). In "Abridged Euclid" the definition of composed ratio is added, in "Abridged Book of Arithmetic" the rule of checking by 9 is generalized for the raise to powers.

E2. Book of Salvation (Kitāb al-najāt) - Calcutta (Buhar 315), Cambridge (456/2, 921), Hyderabad (falsafa 596; Salar falsafa 98, 645), Istanbul (Atıf 1601; BU Veliyuddin 2528; Köprülü 903-904; Millet, Feyzullah 1325; NO 2718/1; SM AS 2389, 2471, 2673, 3689, 4829/4, Carullah 1345/1, Damat 932, Esat 1937, Hamid. 1448/1, Selim. 681, Şehit 1751, Yeni Cami 211, 777, Yusuf 295; TK 3448; Univ. 678), London (978/5, 979, 6572/19), Manchester (379/A), Mashhad (1054-1055), Oxford (I 456/2), Paris (5104), Tehran (Milli 873), Yerevan (45). Description of the Yerevan manuscript: Papazyan [1]. Editions: Ibn Sīnā [13, 19]. Medieval Latin translations: Ibn Sīnā [3] (appendix), [14]. Persian translation of chapters on mathematics according to the Yerevan manuscript (No 317, M1): Ibn Sīnā [63]. Russian translation of the chapter on psychology by Saghadeyev: "Izbrannyye proizvedeniya" [1] (219-260). Russian translation of the chapter on logic: Ibn Sīnā [68] (62-109). Tajiki translation of the chapter on music: Ibn Sīnā [67] (II 219-227). Edition and German translation of chapter on music: al-Hafni [1] (83-99, 57-75), English translation of chapter on psychology by Rahman: Ibn Sīnā [25]. Research: Mahdawi [1] (225-240). Research of chapter on mathematics: K. Ayni [2], Research of chapter on mechanics: Ahadova [10]. Research of the problem of eternity of the world: Sirojov [1]. Abridged version of E1.

E3. Book of Knowledge for `Alā' al-Dawla (Dānish-nāma-yi `Alā'iyya) P - Berlin (55/1), Calcutta (I 1357, II 565, Buhar 215), Istanbul (NO 2082, 2748; SM AS 2530-2531, 4829, Fatih 3312, Hamid. 1448), Lahore (Univ.), London (433/1, 438/2, 2361/3, Sup. 16659/3, 16830; Ind. 474-477, 2218), Mashhad (98, 557), Mosul (Muhammad.), Tashkent (2385/17-19), Tehran (123, 2093, 2897; Malik 930, 1025-1026, 2009/2, 4212/1, 4648/3; Milli 43; Senat 2806/6, 3251/4; Tabatabai 1322). Editions: Ibn Sīnā [8], of chapters I, II and IV - Ibn Sīnā [16], edition of chapters I and II - Ibn Sīnā [22]. French translation by Achena and Massé: Ibn Sīnā [35], Russian translation of chapters I, II and IV by Bogoutdinov: Ibn Sīnā [39], [66] (39-228), [68] (67-202), Tajiki transcription of the same chapters: Ibn Sīnā [67] (I 27-139). Russian translation of chapter III by Rosenfeld and Sadovskiy: Ibn Sīnā [52]. English translation of the chapter on philosophy: Morewedge [1] (11-198). Research: Mahdawi [1] (101-113). Research of chapters on mathematics: Ahadova [3-5], Ahmedov [14], Suchkova [1], Umarov and Rosenfeld [1], Rozhanskaya [6] (150-151, 154-155). Research of chapter on philosophy: Bogoutdinov [1], Morewedge [1]. Abridged Persian exposition of all chapters of E1, sometimes Persian translations of corresponding chapters of E2.

M1. Abridged Euclid (Mukhtaṣar Uqlīdis) - Book I of Part III of E1- Istanbul (SM Fatih 3211), London (Ind. 477/1), Mashhad (5618). Edition by Sabra and Lutfi: Ibn Sīnā [59b]. Research: Jalalov [13], Muhamediyev [1], Sabra [26], Sharipova [2-3], Ünver [4].

M2. Abridged Book of Arithmetic (Mukhtaṣar kitāb al-Arithmāṭiqī) - Book II of the Part III of E1- Cairo (majlis 863/13, Ṭal`at riyāḍa 118/3), Istanbul (Millet, Ali Emiri 2850). Research: Sharipova [1-5].

M3. Research of Principles of Geometry (Taḥqīq mabādī' al-handasa) - Istanbul (SM AS 4849/3).

M4. Treatise on Research of an Angle (Risāla fī taḥqīq al-zāwiya) = Letter on Angle to Abū Sahl al-Masīḥī (Risāla fī'l-zāwiya ilā Abī Sahl al-Masīḥī) - Istanbul (NO 4849/89; SM AS 4829/11, 4849/3, Pertev 617/19, Seyfi 20, Yıldız 385/12; Univ. 4724/14), Patna (2631/6), Tehran (Senat 2252/15), is quoted in the work (No 668, M1) of al-Shirāzī. In (No 668, M1) the problem of the angle of tangency is considered. Al-Shirāzī informs that this problem was considered also in this treatise, and Ibn Sīnā did not regard the angle of tangency as quantity since he believed that quantity must satisfy the Eudoxus-Archimedes axiom. Research: Dovlatova [3], Grigorian and Dovlatova [1], Rosenfeld [39] (160-162). Treatise is addressed to al-Masīḥī (No 285).

M5. Treatise on Geometry (Risāla dar handasa) = Selected from Ibn Sīnā's Translation of Euclid (Muntakhab-i tarjama-yi Uqlīdis-i Ibn Sīnā) P - Calcutta (Curz. 394, 565), Hyderabad (riyāḍa 115).

Persian version of M1, M3, or M4. A1. Abridged "Almagest" (Mukhtaṣar al-Majisṭī) - Book III of Part III of E1 - Cairo (hay'a 72), London (7768), Paris (2484). Research: Saliba [10].

A2. Book on the Method prefered over other Methods for the Construction of Observational Instruments (Maqāla fi'l-ṭarīq alladhī ātharahū `alā sā'ir al-ṭuruq fī ittikhādh al-ālāt al-raṣadiyya) - Leiden (184/8). Edition and German translation: Wiedemann and Juynball [1] (86-118). Facsimile edition of the manuscript by Sezgin: Ibn Sīnā [70]. Research: Bulgakov [18-19], Vahabov [1], Wiedemann [189], Wiedemann and Juynball [1]. Description of an instrument invented by Ibn Sīnā to replace the astrolabe.

A3. Instruments of Observation (al-ālāt al-raṣadiyya) - Tehran (Senat 2252/9).

A4. Treatise of Refutation of the Predictions of Stars (Risāla fi ibṭal aḥkām al-nujūm) = Treatise on Objection to Astrologers (Risāla fi'l-radd `alā al-munajjimīn) - Istanbul (Köprülü 1589/9; NO 4894/103; SM Hamid. 1447, 1448/43; TK 3447/24; Univ. 1458/27), Leiden (1020a/13), London (1349/6). German translation and research: Wiedemann [181]. Research: Ihsanoğlu [2].

A5. Treatise on Celestial Bodies (Risālat al-ajsām al-samāwiyya = Risālat al-ajrām al-`ulwiyya) = Treatise on Celestial Signs (Risāla al-āthār al-`ulwiyya) - Escorial (II 703/1), Istanbul (BU Veliyuddin 3263; Köprülü 169, 868, 1602; NO 4894; Ragıp 1461; SM AS 2456, 4829, 4849, 4853, Emir 1446, 4428, Hafız 207, Hamid. 1448, Hazis 1587, Yeni Cami 1181, Yıldız 801; TK 3447, 4009/4), Manchester (384/E). Edition: Ibn Sīnā [6] (No 2).

A6. Treatise on the Use of Opinion Borrowed from Ancient [Scientists] on the Essence of Celestial Bodies and their Proof (Risālat al-fawā'id fi'l-ra'y al-muḥaṣṣal min al-aqdamīn fi ajrām al-samāwiyya wa bayān madhāhibihim) - Aligarh (Azad. 32/9), London (978/36).

A7. Treatise on the fact that Earth is standing in the Middle of Heaven (Risāla fi qiyām al-arḍ wasaṭ al-samā') = Reason why Earth stands in its place (`Illat qiyām al-arḍ fi ḥayyiziha) = Treatise [the Answer] of the Question of Abū Husayn Aḥmad al-Suhaylī on the Cause of why the Earth stands in the Middle of Heaven (Risāla <fi'l-jawāb> `alā su'āl Abī Ḥusayn Aḥmad al-Suhaylī iyāhu `an `illat qiyām al-arḍ wasaṭ al-samā`) - Cairo (hay'a 47), Dublin (Beatty 3045), Gotha (1158/24), Hyderabad (majlis 41/20; tibb 459/8), Istanbul (Köprülü 1589/41; NO 1864/90, 4894/96; SM Esat 3688/5, Hamid. 1448/51; TK 1584/23, 3447/29), London (981/11, 1349/8, Sup. 16839/11), Oxford (I 980/1), Rampur (760 76/15; I 394, 712), Tashkent (4750/1 - anonymous), Tehran (Sipahsalar 2912/73). Edition: Ibn Sīnā, Khayyām, a. o. [1] (152-163). Tajiki translation: Ibn Sīnā [67] (II 115-124).

A8. Treatise of the Visibility of Stars in the Night and their Invisibility in the Day (Risāla fi ru`yat al-kawākib bi'l-layl lā bi'l-nahār) - Istanbul (SM AS 4872/13), London (Sup. 757/7), Mashhad (68), Tehran (Mahdawi 482/6). English translation and research: Ünver [3].

A9. Concise [Treatise] on the Science of Astronomy (al-Mukhtaṣar fi `ilm al-hay`a) = Treatise on Astronomy (Risāla fi'l-hay'a) = Celestial Sphere and [Lunar] Stations (al-Falak wa'l-manāzil) - Algiers (1452), Cairo (hay'a 10/2, 43, 47, 49), Istanbul (SM Hüsrev 251; TK 3303), London (977/27, Sup. 9599).

A10. Introduction (Muqaddima) - Cairo (majlis 863/15). Iintroduction to A9.

A11. Canon for Section on the Sun and the Moon and the times of Night and Day (Qānūn li- faṣl al-shams wa'l-qamar wa awqāt al-layl wa'l-nahār) - Escorial (II 788/10).

A12. On Visible Distances of Celestial Bodies (Fi'l-ab`ād al-ẓāhira li'l-ajrām al-samāwiyya) - Oxford (280/8).

A13. Longitude and Latitude (al-Ṭūl wa'l-`arḍ) - Cairo (I 29/23), Istanbul (SM AS 4829/32), Rampur (I 76/23, 79b, II 724). Edition: Ibn Sīnā [17] (No 7).

A14. General Observations (al-Arṣād al-kulliyya) - Damascus (8656). Description of the manuscript: al-Sabbagh [1] (148-150). Treatise in 9 chapters: 1) on celestial motions, 2) on declinations, equinoxes, and solstices, 3) on movement of the Sun, 4) on movement of the Moon, 5) on sizes of the Earth, the Sun, and the Moon, 6-7) on longitudal movement of planets, 8-9) on latitudal movement of planets.

A15. Poem on Seasons of the Year (Urjūza fi fuṣūl al-sana) - Cairo (Taymūr majlis 25/2), Damascus (8656).

A16. Treatise on Circles (Risāla-yi adwār) P - Kapurthala.

A17. On Heavens and World (De caelo et mundo). Edition of the medieval Latin translation and research: M. Renaud [1].

A18. [A Letter to Zarrin Gis, daughter of Shams al-Ma`āli Qābūs ibn Wushmagīr, on the verification of the longitude of Gurgan] - is mentioned in "Geodesy" (No 348, G3) by al-Bīrūnī [31] (166-167, 209). Research: Bulgakov [18-19]. Ibn Sīnā solved the problem of finding the longitude without the usual comparison of latitude of this city with latitudes of other cities.

Me1. Criterion of Reason in Operations of Drawing Loads (Mi`yar al-`uqūl-i jarr-i thaqīl) P - Aligarh (Azad. Subh. 1), Calcutta (Curz. 636), London (Ind. Ross 14/2), Rampur (Nadhir 232), Tehran (Mahdawi 281/7, Mishkat 1152, Univ. 892/2, 951, 2573/1). Editions: Ibn Sīnā [4], Humai: Ibn Sīnā [24]. Tajiki transcription:

Ibn Sīnā [67] (II 195-211). Russian translation: Ahadova [1]. Research: Ahadova [7, 10-11], Rozhanskaya [11]. Description of 5 simple machines: windlass, lever, pulley, screw, wedge, and their combinations.

Ph1. Physics (Ṭabī`iyyāt) - Part II of E1 - Damascus (8656).

Ph2. Physics in the Philosophical Sense (Ṭabī`iyyāt min `uyūn al-ḥikma) - Istanbul (SM AS 1298/17-19). Research: Wiedemann [141] (mechanism of sight). "Physics in the Philosophical Sense" is "physics" in the sense of Aristotle; this treatise is a part of Ph1.

Ph3. Golden Fillings of Nature (Qurāḍa-yi ṭabī`iyyāt) P - Tehran (Ahwi; Milli 992; Univ. 1091). Edition: Ibn Sīnā [29]. Tajiki transcription: Ibn Sīnā [67] (II 74-96). Research: Komilov [1-2], Shodiyev and Marupov [1], Zikrillayev, Saidmuradov, and Usmanova [1]. Treatise in 4 parts: 1) animals (16 chapters), 2) plants (8 chapters), 3) minerals (10 chapters), 4) marvels (16 chapters). In Parts III and IV phenomena of Physics (optic, acustics, heat, electricity, in particular, electrical nature of lightning and thunder) are considered.

Ph4. Treatise on the Cause of Thunder and Lightning (Risālat dhikr asbāb al-ra`d wa'l-barq) - Cairo (129/32), Hyderabad (majlis 41/5, tibb 459/27; Salar falsafa 41/3), London (978/15), Mashhad (605), Rampur (I 389, 712, II 724). Edition: Ibn Sīnā [17] (No 7). Tajiki translation: Ibn Sīnā [67] (II 212-215). Research: Mahdawi [1] (31-32), Zikrillayev [4].

Ph5. Treatise on Lighting of Light (Risāla fī istiḍā'at al-ḍaw`) - Hyderabad (majlis 41/21; tibb 429/7), Rampur (I 26c, 76).

Ph6. The Quantity of Cold and Heat is not a Substance (Fī anna kammiyyat al-burūda wa'l-ḥarāra laysat bi-jawhar) - Istanbul (SM AS 4847/12, 4853/13).

Ph7. Definition of a Body (Ḥadd al-jism) - Istanbul (Köprülü 1589; NO 4894/97; SM Hamid. 1448; TK 3447).

Ph8. Body (Jism) - Istanbul (SM Fatih 3170).

Ph9. Letter Written by al-Sheikh al-Ra'is Abū `Alī Ibn Sīnā to Kiya Abū Ja`far (Risāla katabahā al-Sheikh al-Raīs Abū `Alī ibn Sīnā ilā Kiyā Abī Ja`far) - Aligarh (Univ. 32/20), Hyderabad (tibb 459/4). Answer to Kiya Abū Ja`far's question "is fire an essence (jawhar) or not?"

Ph10. Interpretation of their Verses on Smoke (Tafsīr āyāt al-dukhān) - Hyderabad (majlis 41/22).

Mu1. Science of Music (`Ilm al-mūsīqā) = On Music (Fī'l-mūsīqā) = Science of the Art of Music (`Ilm ṣinā`at al-mūsīqā) = Introduction to the Art of Music (al-Madkhal ilā ṣinā`at al-mūsīqā) - Book IV of Part III of E1: Damascus (8656), Hyderabad (III 41/31), Istanbul (NO 595), Oxford (985/1), Rampur (I 76/2). Tajiki translation: Ibn Sīnā [67] (II 219-227). Research: Inoghomjonova [1], Nizamov [1], Vyzgo [1].

PH1. Answers of al-Sheikh al-Rais to Questions of Abū'l-Rayhan al-Bīrūnī (Ajwiba al-Sheikh al-Ra'īs `an masā'il Abī'l-Rayḥān al-Bīrūnī) - Baghdad (Muz. 9821), Istanbul (Millet 320, Feyzullah 1458, 2188/4; NO 2715; SM AS 4853/6; Univ. 1458/185), Leiden (184/4), London (978/50, 980/15), Milan (320), Oxford (1980/2), Rampur (II 216), Tashkent (2385/14), Tehran (99/8, 599/3, 634/24, 1061/1, 1968, 4942-4947; Univ. 253/22). Description of the Tehran manuscripts: Hairi [1] (II 688-691). Edition of the Tashkent manuscript: al-Bīrūnī and Ibn Sīnā [1] (arab. 1-35), edition of one Istanbul manuscript: Ibn Sīnā, Khayyām and others [1] (119-151). Persian translation: Dihkhuda [1] (29-58). Uzbeki translation: al-Bīrūnī and Ibn Sīnā [1] (Uzb. 1-34). Edition by Nasr with English and Persian translations: al-Bīrūnī and Ibn Sīnā [5], edition by Türker Küyel with Turkish translation: al-Bīrūnī and Ibn Sīnā [6]. Russian translation by Zavadovskiy: al-Bīrūnī and Ibn Sīnā [2-4], Ibn Sīnā [68] (365-388). Research: Bausani [1], Fayzullayev [3], Mahdawi [1] (11-15), Mathuri [1], Sharipov [3], Tanci [2], Türker Küyel [2-3], Zavadovskiy [1], Zikrillayev [1].

10 questions of al-Bīrūnī (No 348) on Aristotle's "On the Heavens" (I) and 8 his questions on Aristotle's "Physics" (II) and answers of Ibn Sīnā. (I): 1) gravity and lightness, 2) eternity of the world, 3) "6 sides" of space, 4) mathematical atomism, 5) other worlds, 6) egg-shaped and lentil-shaped solids of revolution, 7) sides of celestial sphere, 8) movement of celestial bodies, 9) burning by light rays, 10) melting and evaporation. (II): 1) reflection of light, 2) movement of elements to and from the center of the Earth, 3) essence of sight, 4) heat in various climates, 5) boundaries of plane figures, 6) vacuum, 7) contents of empty vessels, 8) movement of water.

PH2. Answers on Ten Questions (Ajwiba <' an> `asharat masā'il) - Berlin (5057), Cairo (Taymūr majlis 200), Istanbul (BU Veliyuddin 3181/9, 3263/6; Köprülü 1602/3; Millet, Feyzullah 2188/5; NO 4894/132; Ragıp 1461/29; SM AS 2489/16, 4829/2, 4851/8, 4853/5, Hamid. 1448/11, 1452/13, Yıldız 395; TK 3447/57, 67; Univ. 1458/84, 4724/7, 4755/18), London (978/35, 980/11, 6572), Mashhad (1024/2), Tehran (625/2; Malik 2013/23; Sipahsalar 9371/10; Tabatabai 1367) - answers on new questions of al-Bīrūnī on Aristotle's "On the Heavens".

PH3. Parts of Rational Sciences (Aqsām al-`ulūm al-`aqliyya) = Parts of Philosophy (Aqsām al-ḥikma) - Cairo (Taymūr mīqāt 1, Ṭal`at 339), Gotha (1158/29), Hyderabad (majlis 96), Istanbul (Köprülü 868, 1605, 1628;

NO 4854; SM AS 4818/6, 4829/2, 4853/25, Carullah 1302, Esat 3688, Hafiz 207, Hamid. 1448, Pertev 647, Şehit 272, Yıldız 186, 809, 889; TK 1584/13, 3747/50; Univ. 1458/87, 4711/3, 4754/4, 4755/5), Oxford (I 430/3, 980/10), Princeton (Yehuda 976), Tashkent (2213, 2385, 2947/3), Tehran (634/38, 866/8, 2761/3; Malik 2012/3, 2019/2). Edition: Ibn Sīnā [6] (No 5). French translation by Mimoune: Ibn Sīnā [69a]. Tajiki translation: Ibn Sīnā [67] (II 101-109). Research: Hugonnard-Roche [2], Karimov [3], Mahdawi [1] (41-42), Maróth [2], Matviyevskaya [5] (106-107), Wiedemann [22]. Treatise on the classification of sciences. Sciences are divided as theoretical and practical. Natural and mathematical sciences are practical. Mathematical sciences include arithmetic (number theory), geometry, astronomy, and music, and its branches: science on addition and substraction (practical arithmetic), algebra, optics, statics, hydrodynamics, Zījes and calendar, musical instruments.

PH4. Indications and Directions (Ishārāt wa tanbīhāt). Editions: Ibn Sīnā [9, 36, 43, 44, 46]. French translation by Goichon: Ibn Sīnā [21]. Russian translation: Ibn Sīnā [66] (229-382), [68] (203-326). Tajiki translation: Ibn Sīnā [67] (I 141-260). Research: Boltayev [1] (logic), Mahdawi [1] (32-38), Rahmatullayev [1] (general research), Zakuyev [3] (psychology).

PH5. Treatise on Definitions (Risālat al-ḥudūd). Czech translation by Stepkova: Ibn Sīnā [33]. French translation of the introduction by Goichon: Ibn Sīnā [15a].

PH6. Treatise on Subdivision of Existing Things (Risāla fī taqsīm al-mawjūdāt) - Tashkent (2422). Russian translation by Sal'ye: Ibn Sīnā [41].

PH7. Mystical Treatises: a) Treatise on Living; Son of Awakening (Risālat Ḥayy ibn Yaqẓān), b) Treatise on Birds (Risāla al-ṭayr), c) Treatise on Love (Risāla fī'l-`ishq), d) Treatise on the Essence of Prayer (Risāla fī māhiyyat al-ṣalawāt), e) Book on the Meaning of Pilgrimage and Ways of Its Influence (Kitāb fī ma`nā al-ziyāra wa kayfiyyat ta'thīrihā), f) Treatise on Deliverance from Fear of Death (Risāla fī daf` al-ghamm min al-mawt), g) Treatise on Pre-determination (Risāla fī'l-qadar). Edition by Mehren with French translation: Ibn Sīnā [7]. Russian translation of (b): Shidfar [1] (126-127, 140-143). Russian translations of (a) and (b): Ibn Sīnā [66] (165-194). Russian translation of (c): Ibn Sīnā [66] (111-163), Serebryakov [1] (45-68). Tajiki translations of (a), (b), (c), and (g): Ibn Sīnā [67] (II 29-44, 66-73, 97-100, 176-186). Research of (a) and (b): Shidfar [1] (126-146), research of (a): Goichon [4], Mallet [2], research of (c): Grünebaum [1], Serebryakov [1].

PH8. Sources of Wisdom (`Uyūn al-ḥikma). Editions and research: by Badawi: Ibn Sīnā [34], by Minovi: Ibn Sīnā [34a].

PH9. Character and Passions of the Soul (al-Akhlāq wa'l-infi`ālāt al-nafsāniyya). Edition and research: Remondon [1].

PH10. Treatise on the Essence of the Soul (Risāla fī māhiyyat al-nafs) - Aligarh (Univ. 21/2. Tajiki translation: Ibn Sīnā [67] (II 45-60).

PH11. Oriental Discussions (al-Mabāhith al-mashriqiyya) - Hyderabad (falsafa 482). Research: Massignon [3]. Metaphysical treatise containing questions on physics.

PH12. New Year Treatise (Risāla Nawrūziyya) - Hyderabad (majlis 11/14, 12/10), Mashhad (5949). Metaphysical treatise containing questions on physics.

PH13. Housekeeping (Tadbīr al-manāzil). Tajiki translation: Ibn Sīnā [67] (II 13-28). Research: Mirbabayev [1] (pedagogical questions).

PH14. Lightning [Treatise] (Azhawiyya) P. Edition: Ibn Sīnā [56a]. Russian translation by Olimov: Ibn Sīnā [68] (327-362). Treatise written by young Ibn Sīnā in Bukhara and dedicated to his teacher Abū Bakr Aḥmad ibn Muḥammad al-Baraqī.

PH15. Philosophical Treatises: a) Treatise of Precept (Risāla al-`ahd), b) Book of Issuing and Returning (Kitāb al-mabda' wa'l-ma`ād), c) Treatise on Action, Reaction, and their Subdivisions (Risāla fī'l-fi`l wa'l-infi`āl wa qismātihā), d) Sufficient Guide (Murshid al-kifāya), e) Book of Justice (Kitāb al-inṣāf), f) Book on Subdivision of Souls (Kitāb fī taqsīm al-nufūs), g) Treatise on Achievement of Fortune (Risāla fī taḥsīl al-sa`āda), h) Interpretation of Dreams (Ta`bīr al-ru'ya), i) On Truth and Properties of the Chain of Existing [Things] (Fī ḥaqīqat wa kayfiyyāt silsilat al-mawjūdāt), j) Book of Victory (Ẓafar-nāma). Tajiki translations of (a-c) and (f-j): Ibn Sīnā [67] (II 125-127, 110-114, 144-149, 61-65, 128-143, 167-186, 187-194, 247-250).

PH16. Books of al-Sheikh al-Ra'īs (Maqālāt al-Sheikh al-Ra'īs) - Hyderabad (Sh. 771).

ME1. Law of Medicine (al-Qānūn fī'l-ṭibb). Edition: Ibn Sīnā [30], medieval Latin translation: Ibn Sīnā [3]. Latin translation with notes of Andrea Bellunensis: Ibn Sīnā [2a]. Russian translations: Ibn Sīnā [31, 65]. Uzbeki translations: Ibn Sīnā [32, 61]. Research: Kataye [1], Mahdawi [1] (189-199), Pulatov [1], Sal'ye [6], Shah [2],

Ternovskiy [2], Voronovskiy [1]. Research of the theory of sight: Lindberg [9] (43-56). The classical treatise on medicine and pharmacology.

ME2. Medical Treatises: a) A Poem on Medicine (Urjūza fi'l-ṭibb), b) Cardiac Medicines (Fī'l-adwiya al-qalbiyya), c) Treatise of Prescriptions (Risālat al-wāḥiyya), d) Treatise on Pulse (Risāla fi'l-nabḍ). Edition of (c): Ibn Sīnā [59a]. Edition of (a) with French and medieval Latin translation by Jahier and Noureddine: Ibn Sīnā [37a]. Latin translation by Armeagand Blessi of (a) with commentary by Ibn Rushd (No 512): Ibn Sīnā [1]. English translation by Abdul Hameed of (b): Ibn Sīnā [68]. Uzbeki translation by Shoislomov of (a): Ibn Sīnā [56]. Tajiki translation of (a) and (b): Ibn Sīnā [67] (II 253-316), [55]. Tajiki translations of (c) and (d): Ibn Sīnā [67] (II 317-385, 386-396). Romanian translation of (a) by Bratescu: Ibn Sīnā [49]. Research: Ḥikmatullayev [1-2], Nuraliyev [1], A. D. Papazyan [1], Shoislomov [1-2], Shlionskiy [1], Zillurahman [1].

Ch1. Risala al-Shaikh Abi Ali al-Husayn b. Abdallah b. Sina al-Buhari radıyallahu anhu ila Abi Abdallah al-Barqi fi İlm al-San'a Jawaban li-Sualihi fi'l-Ma'na (Treatise on "ilm al San'a (alchemy) [Letter to Abu Abdallah al-Barqi] – Istanbul (AS 4849, NO 4894, Univ.4724) ed. Ihsanoğlu [13].

L1. Treatise on Letters (Risāla fi'l-ḥurūf) = Articulation of Letters and Causes of the Appearance of Letters (Makhārij al-ḥurūf aw asbāb ḥudūth al-ḥurūf). Edition, Russian translation: Akhvlediani [1-3]. Tajiki translation: Ibn Sīnā [67] (II 228-241). Research: Akhvlediani [1- 2], Maḥmūdov and Maḥmūdov [1]. Treatise on phonology.

L2. Poems (Shi`rhā) P – such as gazel, qit`a, quatrain, bayt. Editions: Ibn Sīnā [26, 42a]. Edition with Russian and Tajiki translations: Ibn Sīnā [62]. Russian translations of the gazel on wine: Ye. Berthels [3] (871), Russian translation of quatrains by Lipkin: Ibn Sīnā [27], Russian translation: Ibn Sīnā [68] (210-225). Uzbeki translation by Shamuhamedov: Ibn Sīnā [51].

L3. Wisdom of `Aruz (Ḥikmat-i `arūḍ) P. Tajiki transcription: Ibn Sīnā [67] (II 242-246).

318. `ABD AL-WAHID AL-JUZJANI

Abū `Ubayd `Abd al-Wāḥid al-Jūzjānī (11th c.), pupil of Ibn Sīnā (No 317), mathematician and astronomer.

See: GAL (I 592), GAS (V 108, VI 280-281), MAA (172-173), MAMS (II 236), SSM (49); al-Bayhaqī [5] (66-67), Pingree [34] (EIr), Saliba [10].

HS1. History of al-Sheikh al-Rais, Proof of Truth, Abū `Alī al-Husayn ibn `Abdallah ibn Sīnā (Ta`rīkh al-Sheikh al-Raīs Ḥujjat al-Ḥaqq Abī `Alī al-Ḥusayn ibn `Abdallāh ibn Sīnā) - Vienna (866/8). English translation by Gohlman: Ibn Sīnā [58], Persian translation by Nafisi: al-Juzjānī [1], Russian translations: Ibn Sīnā [28], [64] (45-58), [68] (55-66), Shidfar [1]. Uzbeki translation: Ibn Sīnā [64a], Tajiki tranlation: Ibn Sīnā [67] (I 15-26), al-Juzjānī [2]. Research: Safa [1], M. Sultanov [1]. Autobiography of Ibn Sīnā finished by al-Juzjānī, contains the list of works of Ibn Sīnā.

M1. [Mathematical Chapters of "Book of Salvation "] - supplement to the work (No 317, E2) of Ibn Sīnā. Arithmetic chapter: Cairo (majlis 863/13, Ṭal`at riyāḍa 118/3).

M2. Treatise on Arithmetic (Risāla fi'l-arithmāṭiqā) - Cairo (majlis 863/14), Tehran (5389/10; Univ. 4888/5, Ilah. 46/1). Revision of the arithmetic chapter of (No 317, E1).

M3. Treatise on Geometry (Risāla dar handasa) P - Calcutta (Curz. 565), Hyderabad (11b). Revision of the geometric chapter of (No 317, E1).

A1. Properties of the Structure of Celestial Spheres (Kayfiyyat tarkīb al-aflāk) - Leiden (174/2a - a fragment).

A2. Book on Properties of Celestial Spheres (Kitāb kayfiyyat al-aflāk) - Oxford (I 940/4).

A3. Abridgement of the Structure of Celestial Spheres (Khilāṣ Kayfiyyat Tarkīb al-aflāk) - Mashhad (5593/9)

319. AL-HASAN AL-KIRMANI

Al-Ḥasan ibn Aḥmad ibn `Abdallāh al-Ṣūfī al-Kirmānī (10-11th c.), from Kirman, astronomer and astrologer.

See: GAS (VI 282, VII 193-194), SSM (48-49).

A1. Book of Principles (Kitāb al-uṣūl) - Cairo (Ṭal`at mīqāt 188), Princeton (Yehuda 2501). Treatise on principles of astronomy and astrology.

320. `ABD AL-QAHIR AL-BAGHDADI

Abū Manṣūr `Abd al-Qāhir ibn Ṭāhir al-Baghdādī (d. 1038) from Baghdad, worked in Nishapur, mathematician and jurist; he knew literature well and was a poet; he died in Isfarain.

See: GAL (I 482), GAL (I 666-667), GAS (V 357), IHS (I 706-707), KWA (I 298), KWA² (II 149), KZ (II 66-67, 174, 217, 279, 352, 384, 398, III 616-617, IV 35, 46, 395, 410, 446, V 32, 44, 57, 84, 108, VI 28, 115, 148, 290, 371), MAA (90), MAMS (II 236-237, III 366), SSM (46); Berggren [10] (65-67), al-Kutubi [1] (I 379), Sa`idan [24] (DSB), Tuqan [1] (262).

M1. Book of Completion: on the Science of Arithmetic (Kitāb al-takmila fī `ilm al-ḥisāb) - Bursa (Haraççıoğlu, 1164/4 - fragment), Cairo (riyāḍa 793/1), Istanbul (SM Laleli 2708/1). Descriptions of the Istanbul manuscript: SHIM (474), Saidan [2] (487-488). Edition: al-Baghdadi [2]. Research: Sa`idan [32, 34]. Treatise in 7 chapters: 1) "Hindu arithmetic" of integers, 2) "Hindu arithmetic" of fractions, 3) arithmetic of sexagesimal fractions, 4) reckoning by fingers, lines, and figures, 5) operations with square and cube roots, 6) number theory, 7) practical problems. Decimal fractions are used in (2).

M2. Book on Measurement (Kitāb al-misāḥa) - Istanbul (SM Laleli 2708/2), Mashhad (5429). Research: Sa`idan [32].

M3. [Treatise on Inheritances] - is mentioned in KZ (IV 395).

H1. Book on Difference among Sects (Kitāb al-farq bayn al-firaq). English translation: al-Baghdadi [1].

321. AL-HASAN IBN AL-BAGHDADI

Abū `Abdallah al-Ḥasan ibn Muḥammad ibn Ḥamla (10-11th c.) was known by the name "Ibn al-Baghdādī" (son of a man from Baghdad), mathematician.

See: GAS (V 392), MAMS (II 237-239), STMI (383).

M1. Treatise on Commensurable and Incommensurable Quantities (Risāla fi'l-maqādīr al-mutashārika wa'l-mutabāyina) - Patna (2468/31). Edition: "al-Rasā'il al-mutafarriqa" [1] (No 9). Russian translations by Matviyevskaya: Matviyevskaya [9] (116-169) (partial), Ibn al-Baghdādī [1] (complete). Research: Matviyevskaya [4], [5] (216-230), [17]. Treatise in 4 chapters: 1) rational and irrational quantities, 2) extension of the notion of number for irrational quantities, 3) propositions supplementing Book X of Euclid's "Elements", 4) exposition of Book X of "Elements" as based on generalized notion of number.

M2. [Treatise on Composed Ratios and Spherical Trigonometry] - is mentioned in the work (No 348, M3) of al-Bīrūnī [24] (151) and in the anonymous "Collection of Rules of the Science of Astronomy" (see Khayretdinova [1], 452).

322. `ABD AL-MALIK IBN AL-QUTIYA

Abū'l-Walīd `Abd al-Malik ibn Sulaymān ibn `Umar al-Umawī (d. 1038), was known by the name "Ibn al-Qūṭiya" (son of a Gothic woman), worked in Seville; artihmetician, knew law and linguistics well.

See: MAA (90), MAMS (II 239); Ibn Bashkuwāl [1] (I 353).

323. MUHAMMAD AL-NAJJAD

Abū `Abdallāh Muḥammad ibn Yūsuf ibn Muḥammad al-Umawī al-Najjād (d. 1038), worked in Cordoba; arithmetician, knowledgeable in linguistics and poetics.

See: MAA (90), MAMS (II 239); Ibn al-Faraḍī [1] (II 100).

324. MUHAMMAD AL-MASRURI

Abū Bakr Muḥammad ibn `Abdallāh ibn `Alī ibn Ḥusayn al-Farā'iḍī al-Ḥāsib (981 -after 1028), was known by the name "al-Masrūrī", worked in Cordoba, traveled into Syria and Iraq; knew arithmetic (ḥasib) and inheritance (farā'iḍī) well.

See: MAA (90-91), MAMS (II 239); Ibn al-Faraḍī [1] (II 93).

325. AHMAD AL-SAFFAR

Abū'l-Qāsim Aḥmad ibn `Abdallāh al-Ṣaffār (d. 1035) (al-ṣaffār = coppersmith), astronomer.

See: GAS (V 356-357, VI 250-251), SSM (46).

A1. Book on Operations with the Astrolabe (Kitāb fī `amal bi'l-asṭurlāb) - Cairo (mīqāt 639/8, 928), London (Sup. 22672).
A2. [Zīj] - Paris (Heb. 1102/1 - partial transcription by Hebrew characters). Transcription by Arabic characters and research: Castells and Samsó [1].

326. IBN AL-`AJIM

Ibn al-`Ajīm (d. 1039), physician and astrologer, knew the science of the ancients well; worked in Iran and Iraq . See: MAA (91), MAMS (II 240), TH [1] (440).

327. MUHAMMAD IBN AL-HAYTHAM

Abū `Alī Muḥammad ibn al-Ḥasan ibn al-Haytham al-Baṣrī (10-11th c.), born in Basra, Iraq, worked in Baghdad; philosopher, physician, mathematician and astronomer. He is often confused with Ḥasan ibn al-Haytham al-Baṣrī al-Miṣrī (No 328).
See: UA (91-97); Heinen [4], Rashed [26], [49] (ENWC (405)), Nebbia [1], Sabra [9], Wiedemann [87].
HS1. [Autobiography written in January-February 1027] - Lahore (Nabi Khan), published by Heinen [4] (254-272), the same text according to another manuscript was included in the work (No 601, HS1) of Ibn Abī Uṣaybi`a: UA (91-96). This autobiography contains two lists of his works: 25 in "mathematical sciences" and 45 in "natural and divine sciences" (logic, medicine, physics, metaphysics). German and Italian translations from UA: Wiedemann [87] (125-137), Nebbia [1] (182-195).
HS2. [List of his works composed in June-July 1028], supplement to HS1, the same manuscripts as for HS1, see Heinen [4] (267-272) and UA (96-97). German and Italian translations from UA: Wiedemann [87] (137-139), Nebbia [1] (195-197).
HS1 lists following mathematical works of Muḥammad ibn al-Haytham:
M1. Commentary on "Elements" of Euclid on Geometry and Numbers (Sharḥ al-Uṣūl li-Uqlīdis fī'l-handasa wa'l-`adad).
M2. Book of Collection of Geometric and Numerical Elements of Both works of Euclid and Apollonius (Kitāb jumi`at fīhi al-uṣūl al-handasiyya wa'l-`adadiyya min kitābay Uqlīdis wa Abūlūnyūs).
M3. Universal Book on Elements of Arithmetic (al-Kitāb al-jāmi` fī usūl al-ḥisāb).
M4. Book on Analysis of Geometric Problems (Kitāb fī taḥlīl al-masā'il al-handasiyya).
M5. Book on Analysis of Numerical Problems by Algebra and Almucabala with Proofs (Kitāb fī taḥlīl al-masā'il al-`adadiyya bi-jihat al-jabr wa'l-muqābala mubarhanan).
M6. Book on Measurement in the Form of "Elements" (Kitāb fī'l-misāḥa`alā jihat al-Uṣūl).
M7. Concise Exposition of Books of Apollonius on Conic Sections (Talkhīs maqālāt Abūlūnyūs fī quṭu` al-makhrūṭāt).
M8. Book on Hindu Reckoning (Maqāla fī'l-ḥisāb al-hindī).
M9. Book on Introduction to Geometric Topics (Kitāb al-Madkhal ilā al-umur al-handasiyya).
M10. Book of Completion of the Proof that Hyperbola and Two Lines which always Approach but do not Meet (Maqāla fī intizā` al-burhān `alā anna al-qaṭ` al-zā'id wa'l-khaṭṭān alladhān lā yaltaqiyānihi yaqtaribān abadān wa lā yaltaqiyān).
M11. Answers to Seven Mathematical Questions Proposed to him in Baghdad (Ajwiba <`an> sab`at masā'il ta`līmiyya su'ila <`anhā> bi-Baghdād).
M12. Book on Geometric Analysis and Synthesis in the Form of Examples for Pupils (Kitāb fī'l-taḥlīl wa'l-tarkīb al-handasiyyayn `alā jihat al-tamthīl li'l-muta`allimīn).
M13. Book on Principles of Irrational Numerical Problems and their Analysis (Maqāla fī uṣūl al-masā'il al-`adadiyya al-ṣammā' wa taḥlīlihā). This book was probably devoted to the problems of generalization of notion of number.
M14. Treatise on the Resolution of Doubts in respect to Euclid's Fifth Book from his book on the Elements of Mathematics (Maqāla fī ḥall al-shukūk `alā Uqlīdis fī'l-maqāla al-khāmisa min kitābihī fī'-l-uṣūl al-riyāḍiyya).
M15. Treatise on Proof of the Proposition Premised by Archimedes in His Division of Angle on Three [Equal] Parts but not Proved (Risāla fī'l-burhān <`alā> al-shakl alladhī qaddamahū Arshimīdis fī qismatihī al-zāwiya thalathata aqsām wa lam yabarhin `alayhī).

A1. Commentary on "Almagest" and its Concise Explanation (Sharḥ al-Majisṭī wa talkhīṣuhu) - Istanbul (TK 3329/2). Description of the manuscript in 123 folios: Sabra [8, 40] (1007-1008, 33). The manuscript contains 244 pages.

HS1 lists other astronomical works: one geographical and one mechanical work of Muḥammad ibn al-Haytham.

A2. Book on Determining the Azimuth of Qibla in the whole Inhabited [Part of the Earth] by Applied Tables (Maqāla fī istikhrāj samt al-Qibla fī jamī` al-maskūna bi-jadāwil wuḍi`at lahā).

A3. Message to Some Captains Prompting them to make Astronomical Observatjons (Risāla ilā ba`ḍ al-ru'asā' fī'l-hathth `alā `amal al-raṣad al-nujūmiyya).

A4. Book on Shadow Instrument (Kitāb fī ālat al-ẓill) - revision of the work (No 174, A2) of Ibn Sīnān.

G1. Book on Determining the Distance between Two Cities by Geometric Operations (Maqāla fī istikhrāj mā bayna'l-baladayn fī'l-bu`d bi-jihat al-umūr al-handasiyya).

Me1. Book on Building Foundation Pits and Edifices (Maqāla fī ijārāt al-ḥufūr wa'l-abniya).

Me2. Abdrigement of the Book by Menelaus on the Knowledge of Quantities of Different Substances (Talkhīṣ maqālat Manalāwus fī ta'arruf al-jawāhir al-mukhtalifa)-Lahore (Nabi Khan). Description of the manuscript: Sabra [40] (13-14). Treatise on finding weights of an alloy in the air and water.

HS2 lists the following works of physics and one meteorological work by Muḥammad ibn al-Haytham:

Ph1. Book on Optic according to the Method of Ptolemy (Maqāla fī'l-manāẓir `alā ṭarīq Baṭlamyūs).

Ph2. Book of Concise Exposition of the Science of Optics according to the Books of Euclid and Ptolemy (Kitāb khullāṣa fīhi `ilm al-manāẓir min kitābay Uqlīdis wa Baṭlamyūs). In Ph1-Ph2 the author, like Euclid and Ptolemy but unlike al-Ḥasan ibn al-Haytham (No 328), believed that sight is realized by "optical rays" issuing from the eyes. Thus in a way, the lost Book I of Ptolemy titled "Optics" was restored in Ph2.

Ph3. Book on Indivisible Particle (Maqāla fī'l-juz` alladhī lā yatajazza').

Mt1. Reasoning on Celestial Bodies which are Formed in the Air (Qawl fī'l-kawākib al-ḥāditha fī'l-jaww).

328. AL-HASAN IBN AL-HAYTHAM

Abū `Alī al-Ḥasan ibn al-Ḥasan ibn al-Haytham al-Baṣrī al-Miṣrī (965-1041) was born in Basra, Iraq. He was a great mathematician, astronomer, physicist, and the founder of experimental science. He supported the results of his experiments with strong proofs. He studied and wrote his book M2 in Iraq, where he envisaged the construction of a high dam on the river Nile near Aswan to regulate its waters. When Caliph al-Ḥākim (996-1021) heard about this book (M2), he invited Ibn al-Haytham to Egypt, where firsthand observation convinced al-Haytham that such a construction was impossible and he simulated madness and was put under house arrest until al-Ḥākim's death. Only after 1021, under the following Fatimid caliphs al-Zahir (1021-1036) and al-Mustanṣir (1036-1094) that he was able to pursue his scientific activies and teach. In medieval Europe he was known as "Alhazen" (Latin form of "al-Hasan").

See: GAL (I 617-619), GAL² (I 851-854), GAS (V 358-374, VI 251-261, 294, VII 288, 411-412), HD (340), HD² (223), HMA (I 512-525), IHS (I 721-723), KZ (I 382, II 180, III 38, 150, VI 170), MA (91-92, 114-118, 128-130, 173-174), MAA (91-95), MAA² (169-170), MAMS (II 240-255, III 366), PI (II 243-250), SSM (47), STMI (278, 388-389, 469), TH (165-168), UA (II 90-98); Adnan [9] (IA), Aḥmad Khan [1], Ansari [6], Baldi [1] (461-467), al-Bayhaqī [1] (155-156), [5] (60-61), de Boer [3] (133-137), Chaudhri [1], Chawushi [5], al-Dabbagh [7], al-Damardash [5], Federici Vescovini [2], Ghali [1], Ghani [1], de Goeje [2], Heinen [3], Hermelink [7] (GWG), Hijab [1-2], Hogendijk [8] (52-63), Kapp [1] (I 73-77), Krafft [5] (GWG), Z. al-Kutubi [1], Lorch [14] (LM), Meyerhof [1] (27-51), Mieli [2] (105-107), Musharrafa [2], Namus [1], Narducci [1], Nasir [1], Nazif [2, 4-6], Nazif and Ghalioungui [1], Nebbia [1], [2] (SeT), Omar [1, 3], Pines [15], Rashed [19, 36-37], [49] (ENEC), Rosenfeld [15, 19, 24, 27,], Sabra [8, 40] (DSB), [15] (GAC), L. Sa`di [2-3], Said [1-2], Sarton [2], Saud [1-2, 4], Schnaase [2], Schramm [2, 4], Stiegler [1], Suter [39] (EI), Tuqan [1] (294-309), Ueberweg [1] (324-325), Ülken [4] (197-200), Vernet [13] (EI²), Wiedemann [87, 126], Winter [5], Woepcke in the book: Khayyām [1] (73-77).

Memorial collection and collection of papers: "Ibn al-Haytham". [1-5]

HS1. [List of Works of al-Ḥasan ibn al-Haytham for the end of 429 h.] in revision of Ibn Abī Uṣaybi`a (No 601) – UA (I 97-98). German and Italian translations: Wiedemann [91] (139-143) and Nebbia [1] (197-200). List of 92 works of al-Ḥasan ibn al-Haytham for October 1038.

HS2. List of Books of al-Ḥasan ibn al-Ḥasan ibn al-Haytham for the end [of year 428] Fihrist kutub al-Ḥasan ibn al-Ḥasan ibn al-Haytham ila akhir [sana 428] – Lahore (Nabkhan) – the list is interrupted on the 63rd title.

Publication of the Lahore manuscript: Heinen [4] (73-77). List of more than 75 works of al-Ḥasan ibn al-Haytham for 1037.

HS3. List of Works of al-Ḥasan ibn al-Ḥasan ibn al-Haytham for the year 427 (Fihrist taṣānīf al-Ḥasan ibn al-Ḥasan ibn al-Haytham bi-sana 427) – St. Petersburg (Nat. ANS 600/5). List of 75 works of al-Ḥasan ibn al-Haytham for the year 1036. Description: Rosenfeld [26, 31]. List of more than 60 works of al-Ḥasan ibn al-Haytham for the year 1036.

M1. Book on Resolution of Doubts in Euclid's work "Elements" and Explanation of its Meaning (Kitāb fi ḥall shukūk kitāb Uqlidis fi'l-uṣūl wa sharḥ ma'ānīh) - Alexandria (ḥisāb 42), Berlin (5921 - incomplete), Bursa (Haraççıoğlu. 1172/2), Cairo (riyāḍa 891 - incomplete, Khalīl riyāḍa 1), Hyderabad (riyāḍa 327), Istanbul (SM Fatih 3439/2; Univ. 800), Leiden (516 - incomplete), Peshawar (323, 4718), Kazan (103), Tehran (Malik 3433), this book is not mentioned in all three H1-3, it was written after October 1038. Edition of the Istanbul manuscript SM Fatih 2439/2: Ibn al-Haytham [15]. French translation of chapter on parallel lines: Jaouiche [4] (177-184). Research of chapter on parallel lines: Jaouiche [4] 65-74), Rosenfeld [8]. Research of other chapters: Quliyeva [1-3] (fundamental notions of geometry, composed ratios). General research: Mursi [1]. In the chapter of parallel lines, the first in the history of mathematics, proof of the Euclid's postulate (V) without the logical error "petitio principii", based on the more evident postulate "it is impossible to draw on a plane through a point two lines which do not meet the given line" (the Playfer axiom).

M2. Commentary on Introductions of Euclid's work "Elements" (Sharḥ muṣādarāt kitāb Uqlīdis fi'l-uṣūl) - Algiers (1446/1), Bursa (Haraççıoğlu 1172/1), Cairo (riyāḍa703/1 - a fragment), Istanbul (Millet, Feyzullah 1359/2; TK 3454/2 - V and VI books), Oxford (I 908/1), Princeton (Yehuda 1039), Kazan (104), Rampur 3657), Tehran (34/8 - incomplete), Tunis (Aḥmad. 5482/1), is mentioned in HS1 and HS2 and not mentioned in HS3; was written in 1036-1038. Edition with English translation by Huper Sude: Ibn al-Haytham [11]. French translation of the chapter on parallel lines: Jaouiche [4] (161-175). Russian translation of this chapter according to Oxford and Kazan manuscripts: Rosenfeld [8] (743-762), Russian translation of the introduction to the Book X: Matviyevskaya [19] (53-64). Research of the chapter on parallel lines: Jaouiche [4] (57-65), Rosenfeld [8] (734-739, 777-780), [25] (57-65), [45] (59-64), [52] (262-263), Rosenfeld and Yushkevich [10] (459-62). Research of other chapters: Quliyeva [1-3] (fundamental notions of geometry, composed ratios), Matviyevskaya [4] (230-231), [19] (51-52, 62-64) (introduction to the Book X), Plooij [1] (theory of ratios). In the chapter of parallel lines the proof of Euclid's postulate V contained the logical error "petitio principii", like in treatise (No 103, M16) of Ibn Qurra, both these proofs are based on the existence of "simple motion" (parallel translation), containing the assertion equivalent to postulate V.

M3. Treatise on the Uses and Results of Commentary on Introductions [to Euclid's "Elements"] (Risāla fi'l-fawā'id wa'l-mustanbaṭāt min sharḥ al-muṣādarāt) - Istanbul (SM Carullah 2061/14) - is not mentioned in all three H1-3; that is, it was written after 1037.

M4. Reasoning on Principles of Measurement (Qawl fi uṣūl al-misāḥa) = Book of Measurement (Kitāb al-misāḥa) = On Measurement (Fi'l-misāḥa) - Istanbul (SM Fatih 3439/14), London (Ind. 734/9), St. Petersburg (B 2139/2; Nat. Firk. 143/2), is mentioned in all three H1-3 and in KZ (V 150). Edition: Ibn al-Haytham [4] (No 7). German translation: Wiedemann [35] (17-24). English translation by Loozy: "Ibn al-Haytham" [1] (247-254). Urdu translation by Chaudhuri: Ibn al-Haytham [7] (75-81).

M5. Book on Analysis and Synthesis (Maqāla fi'l-taḥlīl wa'l-tarkīb) - Cairo (Taymūr riyāḍa 323/1), Dublin (Beatty 3652/12), Istanbul (SM Reşit 1191/1), St. Petersburg (Nat ANS 600/11) is mentioned in all three H1-3. Research: Jaouiche [3], Rashed [31-32].

M6. Reasoning on the Measurement of a Globe (Qawl fi misāḥat al-kura) - Algiers (1446), Aligarh (Azad 'Abd al-Hayy 50, 678), Berlin (2970/13), Istanbul (Atıf 1714/20), St. Petersburg (B 1030/3a), is mentioned in all three H1-3. Russian translation by al-Dabbagh: Ibn al-Haytham [6]. Research by al-Dabbagh: Ibn al-Haytham [3].

M7. Book that the Sphere is the largest of the Corporal Figures with Equal Surfaces and the Circle is the Largest of the Plane Figures with Equal Perimeters (Maqāla fi anna al-kura awsa' al-ashkāl al-mujassama allatī iḥā ṭatuhā mutasāwiyya wa-anna al-dā'ira awsa' al-ashkal al-musaṭṭaḥa allatī iḥā ṭatuhā mutasāwiyya) - Berlin (oct. 2970/9), Istanbul (Atıf 1714/18), Tehran (Tugabuni 110), is mentioned in all three H1-3. Russian translation by al-Dabbagh: Ibn al-Haytham [5]. Research: Dilgan [7]. Solution of plane and solid isoperimetric problems.

M8. Exhaustive Book of Crescent-formed Figures (Maqala mustaqsāt fi'l-ashkāl al-hilāliyya) - Berlin (oct. 2970/3, Istanbul (Atıf 1714/17; SM Fatih 3439 - a fragment), London (Ind. 734/12), St. Petersburg (B 1030/3), is mentioned in all three H1-3. Research: 'Abd al-Latif[1]. In the calculation of the areas of plane figures bounded by arcs of circles, in particular, the following theorem is proved: if on the two sides AB and BC of a rectangular triangle ABC and on its hypothenuse AC three semicircles are built as on diameters and the third

cemicircle cuts from first two semicircles, two crescent-formed figures AEBH and BFCG, then the sum of areas of these figures is equal to the area of triangle ABC (if AB=BC these crescent-formed figures are Hippocrates' figures).

M9. Concise Book of Crescent-formed Figures (Maqāla mukhtaṣara fi'l-ashkāl al-hilāliyya) - Aligarh (Azad `Abd al-Hayy 678/55), St. Petersburg (B 1030/11), is mentioned in all three H1-3. Abrigement of M8.

M10. Treatise on Quadrature of a Circle (Risāla fī tarbī` al-dā'ira) = Book on Possibility of Quadrature of a Circle (Kitāb fī imkān tarbī` al-dā'ira) - Aligarh (Azad `Abd al-Hayy 51, 678), Berlin (5941, fol. 258, quart. 559), Cairo (falak 3626/21, Taymūr riyāḍa140/5), Calcutta (177, Buhar 343/3), Hyderabad (jadid 4196, riyāḍa327), Istanbul (SM AS 4832 II/21, Beşir 440/11a, Carullah 1502/15), Manchester (381), Mashhad (108, 5395/1), Munich (350), Patna (2928-2929, 3692), Rampur (I 418), Rome (Vat. 320), Tehran (181/3, 205/3, 2998 - incomplete; Malik 3179, Mu`tamid 120/17; Sipahsalar 559; Univ. 1063, 1066), is mentioned in all three H1-3. Edition of the Berlin and Roman manuscripts and German translation and research: Suter [5]. Proof of the same theorem on crescent-formed figures as in M8, and the assertion that for each circle there is an equal square.

M11. On Division of two Different Magnitudes one by the other Mentioned in the First Proposition of the Tenth book of the Euclid's Work (Fī qismat al-miqdārayn al-mukhtalifayn al-madhkūrayn fi'l-shakl al-awwal min al-maqāla al-`āshira min kitāb Uqlīdis) - St. Petersburg (B 1030/4), is mentioned in all three H1-3. Generalization of the fundamental lemma of the method of exhaustion, proposition X1 of "Elements": if A > B for sufficient great n $A-\frac{A}{2}-\frac{A}{2^2}-\dots-\frac{A}{2^n}<B$.

M12. On the Proposition of Banū Mūsā (Fī shakl Banū Mūsa) - Aligarh (Azad `Abd al-Ḥayy 1/2), Cairo (riyāḍa690/1), Istanbul (AM 3025; Atıf 1714/16), London (975/2, Sup. 14332/2; Ind. 734/8), is mentioned in HS1 and HS2 and not mentioned in HS3. Edition: Ibn al-Haytham [4] (No 6). German Translation: Wiedemann [34] (14-16). Correction of a proposition of the work of Banū Mūsā (No 74, M1).

M13. Book on the Construction of a Heptagon Inscribed into a Circle (Maqāla fī `amal al-musabba` fi'l-dā'ira) - Istanbul (AM 3025; Atıf 1714/19), is mentioned in all three H1-3. Edition and research: Rashed [18]. German Translation: Schoy [34] (85-91). Research: Qurayshi [1]. Construction of a regular heptagon by means of the solution of a cubic equation.

M14. Talk on a Premise for a Side of Heptagon (Kalām `ala muqaddima fī ḍil` al-musabba`) - Aligarh (Azad `Abd al-Ḥayy 678 - a fragment), London (Ind. 734/21), Oxford (I 913/21, 987/323), is mentioned in all three H1-3. Probably, this treatise coincides with the treatise quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 9, 27). German translation of these fragments: Suter [43] (22-23). Russian translations of these fragments by Bulgakov: al-Bīrūnī [50] (30, 38), by Krasnova and Karpova: al-Bīrūnī [23] (95, 104). Treatise of Archimedes' premise for the construction of a regular heptagon.

M15. Book on the Measurement of Parabolic Solid (Maqāla fī misāḥat al-mujassam al-mukāfi') - London (Ind. 734/11), Zanjān, is mentioned in all three H1-3. Abridged German translation: Suter [23]. Research: Rashed [20]. Treatise in 9 propositions. Besides calculation of the volume of solid obtained by the rotation of a segment of parabola around diameter, in the last case the calculation is equivalent to the calculation of an integral $\int x^4dx$.

M16. Treatise on Properties of Perpendiculars of the Triangle (Risāla fī khawāṣṣ al-muthallath min jihat al-`amūd) - Patna (2468/33), is mentioned in all three H1-3. Edition: Ibn al-Haytham [4] (No 29). English translation by Shamsi: "Ibn al-Haytham" [1] (228-246). Urdu translation by Muḥammad Yaḥyā: Ibn al-Haytham [7] (93-102). Research: Hermelink [6]. Proof that the sum of perpendiculars dropped from any point inside a triangle onto its sides is constant.

M17. Book on Known [Quantities] (Maqāla fi'l-ma`lūmāt) - Paris (2458/5), St. Petersburg (Nat. ANS 600/10), is mentioned in all three H1-3. French translation (incomplete): L. Sédillot [1]. Research: Rashed [39]. Treatise contains an "Introduction" on actual and potential knowledge, on continuous and discrete quantities, and 2 books, in 24 and 25 propositions, including theorems on various properties of circles: invariance of circles and straight lines under homotheties and translations, circles of Apollonius.

M18. Treatise on Solution of Doubts about Solids in Books of Euclid's "Elements", a Supplement to the Book of Hero (Risāla fī istikhrāj shukūk al-mujassamāt min kitāb Uqlīdis - tatimmat kitāb Irūn) - Istanbul (SM Yeni Cami T 217/2), is mentioned in all three H1-3.

M19. Book of Comments on the Compass for Drawing Great Circles (Qawl (Maqāla Mashrūḥa) fī birkār al-dawā'ir al-`iẓām) - Leiden (133/6), London (Ind. 734/16), St. Petersburg (B 1030/10), Rampur (3666), is mentioned in HS1. Treatise on an instrument for drawing circles of great size. German translation and research: Wiedemann [116].

M20. Concise Book on the Compass for Drawing Great Circles (Maqāla mukhtaṣara fī birkār al-Dawā'ir al-`iẓām). Book of Comments on the Compass for Drawing Great Circles (Maqāla Mashrūḥa fī birkār al-dawā'ir al-`iẓām), is mentioned in KS1 and not mentioned in HS3. Concise exposition of M19.

M21. Reasoning on Geometric Problems (Qawl fī masa'il handasiyya) = On a Geometric Problem (Fī mas'ala handasiyya) - Oxford (I 877/5 under the second title), St. Petersburg (B 1030/7 under the first title), is mentioned in HS1and HS3. German translation: Schoy [30]. Treatise contains theorems on triangles and circles.

M22. Book on the Division of a Line Used by Archimedes in the Second Book of His Work "On the Sphere and Cylinder" (Maqāla fī qismat al-khaṭṭ alladhī ista`malahū Arshimīdis fī'l-maqāla al-thāniya min kitābihī fī'l-kura wa'l-usṭuwāna) - Algiers (1446/9), Cairo (riyāḍa 898/27), Istanbul (Atıf 1712/16; SM Beşir 440/18, Carullah 1502/13, 23, Selim 743 I/10; TK 3453/16, 3456/18), Leiden (14/26), London (Ind. 734/18), is mentioned in (HS1) and (HS2) and not mentioned in HS3. Abridged French translation by Woepcke: Khayyām [1] (91-95). Problem: to divide segment (c) to two parts (x) and (c-x) such that, if (l) is given segment and (S) is given area, ($S:x^2=(c-x):l$). Al-Mahānī (No 82) had reduced this problem to a cubic equation, here a kinematic solution is given.

M23. Reasoning on Space (Qawl fī'l-makān) – Aleppo (Basil 725), Cairo (falak 3823/1), Hyderabad (Salar hay'a 31/4, 2196), Istanbul (SM Fatih 3439/8), London (Ind. 734/7), Tehran (2498), is mentioned in (HS1) and (HS3). Edition: Ibn al-Haytham [4] (No 5). German translation: Wiedemann [34] (1-7), English translation by Zaydi: "Ibn al-Haytham" [1] (224-227). Urdu translation by Zabiri Nadwi: Ibn al-Haytham [7] (83-92). Philosophical treatise on the definition of empty space.

M24. Reasoning Known as Rarities in Arithmetic of Deals (al-Qawl al-ma`rūf bi'l-gharīb fī ḥisāb al-mu`āmalāt) - Berlin (oct. 2970/17), Istanbul (Atıf 1714/13; Millet, Feyzullah 1265/1), is not mentioned in all three (H1-H3). Description of the manuscripts: GAS (VII 412). Edition, German translation and research: Rebstock [2].

M25. Book of Deals in Arithmetic (Kitāb al-mu`āmalāt fī'l-ḥisāb) - Istanbul (Millet, Feyzullah 1365/2), is mentioned in (HS1) and (HS3). Description of the manuscript: GAS (VII 411).

M26. On Corporal Numerical Problem (Fī mas'ala `adadiyya mujassama) - London (Ind. 734/17), is mentioned in HS1and HS3. French translation and research: Sesiano [1]. Problem of division of a number to two parts one of which is equal to the cube of the other part. The problem is reduced to the cobic equation ($x^3+x=a$) which is solved by means of intersection of two conic sections.

M27. Reasoning on the Solution of a Numerical Problem (Qawl fī istikhrāj mas'ala `adadiyya) - London (Ind. 734/20), Tehran (Malik 3086/5), is mentioned in HS1 and HS2 and not mentioned in HS3.

German translation: Wiedemann [34] (11-13). French translation and research: Rashed [19]. Research: Wiedemann [16]. Determination of a number which is multiple to 7 and at division by 2, 3, 4, 5, and 6 gives the rest 1. In the course of this study Ibn al-Haytham gives a criterion for determining prime numbers, or the so-called Wilson theorem: for n>1 following conditions are equivalent: 1) n is prime, 2) $(n-1)! \equiv -1 \pmod{n}$. $(n-1)! \equiv -1 \pmod{n}$.

M28. Book on Problems of Combination from Rarities of Arithmetic (Maqāla fī masā'il al-talāqī min mulāḥ al-ḥisāb) - St. Petersburg (B 1030/6), is mentioned in (HS1) and not mentioned in(HS3). German translation and research: Wiedemann [78]. Solution of indefinite linear equations.

M29. Reasoning on Determining the Edge of a Cube from a Cubic Number (Qawl fī istikhrāj ḍil` al-muka`ab min al-`adad muka`ab) - St. Petersburg (Nat. ANS 600/14) - is mentioned in all three H1-3. Critique of the method of extraction of a cubic root from integers by "Indian arithmetic", that is by the method described by al-Jili in (No 308, M1) and by al-Nasawi in (No 341, M3) coinciding with the Ruffini-Horner method of solution of cubic equations, and proposition of the method of extraction of a cubic root by "arithmetic of deals". In the first method the approximate value (a_1) of the cubic root from($n=a^3+r$), where(a^3) is the maximal cube < n, is $a + r / (3a^2+3a+1)$, in the second method it is $a_2 = a + r/3a^2$. The method of "arithmetic of deals" is more exact. Russian translation: Ahmedov [10] (113-116). Research: A. Ahmedov [10] (113, 116-117).

M30. Reasoning on the Determination of Heights of Vertical Objects (Qawl fī istikhrāj a`midat al-jibāl) = On Knowledge of Heights of Vertical Objects (Fi ma`rifat irtifā` al-ashkhāṣ al-qā'ima) - Cairo (riyāḍa 898/8), Leiden (14/8), New York (Columb. Smith 45/12), Oxford (I 877/10), Tehran (2773/2; Malik 3433), is mentioned in HS1 and HS3. German translation: Suter [17] (27-28).

M31. Book of Completion of "Conic Sections" (Kitāb Maqala fil-tamām al-Makhrūṭāt) - Manisa (1706), is not mentioned in all three H1-3. Edition by N. Terzioğlu: Ibn al-Haytham [10]. Edition with English translation: Hogendijk [8] (133-310). Research: Abdukabirov [1], Hogendijk [8] (311-382), Rashed [27]. An attempt of reconstruction of the lost Book VIII of Apollonius' "Conic Sections".

M32. Book on the Resolution of Doubts in the Twelfth Book of Euclid's work (Maqāla fī ḥall shukūk fi'l-maqāla thāniya 'ashara min kitāb Uqlīdis) - St. Petersburg (Nat. ANS 600/6), is mentioned in all three H1-3. Treatise is a part of M1.

M33. Book of Properties of Circles (Maqāla fī khawaṣṣ al-dawā'ir) - St. Petersburg (Nat. ANS/13), is mentioned in HS1 and HS3.

M34. Book on the Undivisible Particle (Maqāla fi'l-Juz' alladhī la yatajazza') – Aleppo (Basil 726). Treatise on atoms of the space.

M35. Book of Defect of [Calculation of] a Root, Its Multiplication, and Its Shift (Maqāla fī 'illat al-jidhr wa iḍ'āfihī wa naqlihī) – Book on Defects of Indian Arithmetic (Maqāla fī 'Ilal al-ḥisāb al-hindī). Aligarh (Azad 'Abd al-Ḥayy 678). Under the first title, which is mentioned also in TH, the second title is mentioned in HS1. In the treatise M29 on extraction of a cubic root the method of this extraction in the books (No 308, M1) of al-Jīlī or (No 341, M3) of al-Nasawī on "Indian Arithmetic" is criticized. Probably the critique of "Indian arithmetic" in this treatise is analogous.

HS1-3 list the following mathematical works of Ibn al-Haytham whose manuscripts are not found:

M36. Book on the Resolution of Doubts in the First Work in Euclid's Book (Maqāla fī ḥall shukūk al-maqāla ūlā min kitāb Uqlīdis). The treatise is a part of M1. The chapter on parallel lines is quoted in the treatise (No 606, M15) of al-Ṭūsī [16] (486-489), is mentioned in (HS1 and HS3).

M37. Book on Compass for [Conic] sections (Kitāb fī birkār al-quṭū'), is quoted also in the work (Ph6) by Ibn al-Haytham [4] (No 3, 11), is mentioned in all three (H1-H3). This compass, apparently, coincides with perfect compass of al-Kūhī (see No 277, M8).

M38. [Book on the Determination of Four Lines between Two Known Lines] is mentioned also in the algebraic treatise (No 420, M2) by Khayyām [25] (106), is mentioned in all three H1-3.

M39. Book on Properties of Parabola (Maqāla fī khawāṣṣ al-qaṭ' al-mukāfi'), is mentioned in all three H1-3.

M40. Book on Properties of Hyperbola (Maqāla fī khawaṣṣ al-qaṭ' al-zā'id), is mentioned in all three H1-3. Treatises M39 and M40 are listed as separate treatises in HS1 but in HS2 they are collected in the Book on Properties of [Conic] Sections (Maqāla fī khawaṣṣ al-quṭū ').

M41. Book on Pentagon Inscribed into a Square (Maqāla fī 'amal mukhammas fī murabba'), is mentioned in all three H1-3. This treatise in HS2 is called "Book of al-Kūhī" and indeed is a revision of the treatise (No 277, M21) of al-Kūhī.

M42. Reasoning on a Problem of Arithmetic (Qawl fī mas'ala ḥisābiyya), is mentioned in all three H1-3.

M43. Book on the Numbers of a Magic Square (Maqāla fī a'dād al-wafq), is mentioned in all three H1-3.

M44. Book on a Sphere Moving on a Plane (Maqāla fi'l-kura al-mutaḥarrika 'alā'l-saṭḥ), is mentioned in all three H1-3.

M45. Book on Calculus of Two Errors (Maqāla fi'l-ḥisāb al-khata'ayn), is also mentioned in KZ (III 143), is mentioned in all three H1-3.

M46. Reasoning on Answer for a Problem of Measurement (Qawl fi'l-jawāb <'an> mas'ala fi'l-misāḥa).

M47. Book on the Maximal Lines which can be Inscribed in a Segment of a Circle (Maqāla fī a'ẓām al-khuṭūṭ allatī taqa'u fī qaṭ' al-dā'ira), is mentioned in HS1 and not mentioned in HS2 and HS3.

M48. Reasoning on the Division of General Quadrangle (Qawl fī qismat al-munḥarif al-kullī), is mentioned in HS1 and not mentioned in HS2 and HS3.

M49. Book on the Junction of Particles. (Maqāla fī jam' al-ajzā'), is mentioned in all three H1-3. Probably this treatise on mathematical atomism is devoted to the problem of the minimal solid obtained by junction of atoms of space.

M50. Book on Commentary on "Arithmetic" in the Form of Scholias (Maqāla fī sharḥ al-Arithmāṭīqā 'ala ṭarīq al-ta'līq), is mentioned in HS1 and HS2 and not mentioned in HS3.

M51. Scholia Added by Isḥāq ibn Yūnis al-Mutaṭabbib in Egypt to [Commentary] by Ibn al-Haytham on the Work of Diophantus on Problems of Algebra (Ta'līq 'allaqahū Isḥāq ibn Yūnis al-Mutaṭabbib bi-Miṣr 'an Ibn al-Haytham fī kitāb Diyufanṭus fī masā'il al-jabr) - is mentioned in HS1 and HS2 and not mentioned in HS3. Super-commentary by Ibn Yūnis (No 389, M1) on Ibn al-Haytham's commentary on Diophantus' "Arithmetic".

M52. Book on Spheres and Explanation of Solids (Maqāla fi'l-ukar wa sharḥ al-mujassamāt) – is mentioned in HS2.

A1. Reasoning on the Resolution of Doubts of Comprehensive Movement (Qawl fī ḥall shukūk ḥarakat al-iltifāf) - Berlin (2970/11), Istanbul (Atıf 1714/15), St. Petersburg (B 1030/1), is mentioned in all three H1-3. Edition: Sabra [27].

A2. Book on the Movement of the Moon (Maqāla fī ḥarakat al-qamar) - Istanbul (SM Fatih 3439/13), Oxford (I 877/3), St. Petersburg (1030/5), is mentioned in HS1and HS3.

A3. Book on the Form of the Movement of Each of the Seven Planets (Maqāla fī hay'at ḥarakat kulli wāḥid min al-kawākib al-sab'a) - St. Petersburg (Nat. ANS 600/12), is not mentioned in all three H1-3. al-Bayhaqī informs that it was the last work of Ibn al-Haytham.

A4. Reasoning on Determining the Azimuth of Qibla (Qawl fī istikhrāj samt al-Qibla) - Istanbul (SM Fatih 5396/5), Oxford (I 877/4), St. Petersburg (B 1030/8), is mentioned in HS1 and not mentioned in HS2 and HS3. German translation: Schoy [16]. Research: Rosenfeld [59] ("geometric trigonometry" used in this treatise).

A5. Reasoning on the Azimuth of Qibla by Reckoning (Qawl fī samt al-Qibla bi'l-ḥisāb) - Berlin (oct. 2970/1), Cairo (falak 3823/3), Istanbul (Atıf 1714/1; SM Fatih 3439/12), Tehran (3900, 3900/1, Tugabuni 110/2), is mentioned in HS1 and not mentioned in HS2. Edition with English translation: Dallal [4].

A6. Reasoning on the question of answer on Parallaxis of the Moon (Qawl fī jawāb 'an mas'ala fī ikhtilāf manẓar al-qamar) - London (Ind. 734/19), St. Petersburg (B 1030/9), Tehran (Malik 3086/3), is mentioned in all three H1-3.

A7. Response to the Question of whether the Milky Way is located in the air or in the Body of Heaven (Jawāb 'an su'āl sā'il 'an al-majarra hal hiya fī'l-hawā' aw fī jism al-samā) = Book of Refutation for those who have another opinion about the Milky Way (Maqāla fī'l-radd 'ala man khālafahū fī ma'ānihī <ḥawla> al-majarra) - Edirne (Selim. 713/11), Leiden (184/10), Tehran (Univ. 15) under first title, is mentioned in all three H1-3 under the second title. Research: Wiedemann [90].

A8. Book on Determining the Altitude of the Pole with Extreme Accuracy (Maqāla fī istikhrāj irtifā' al-quṭb 'alā ghāyat al-taḥqīq) - Berlin (oct. 2970/6), Cairo (riyāḍa 898/11), Istanbul (Atıf 1714/4; SM Fatih 3439/9), Leiden (14/11), London (Sup 3034), New York (Columb. Smith 45/3), Oxford (I 877/6), is mentioned in HS1and HS3. Edition and research: al-'Ayib [1]. Latin translation by Golius: Ibn al-Haytham [2]. German translation: Schoy [13].

A9. Treatise on Horary Lines (Risāla fī khuṭūṭ al-sā'āt) - Istanbul (AM 3025, Atıf 1714/7), is mentioned in HS1 and HS3. Treatise contains the critique of the work (No 174, A2) of Ibn Sīnān.

A10. Book on what happens because of the Difference in Altitudes of Celestial Bodies (Maqāla fī mā ya'riḍu min al-ikhtilāf fī irtifā'āt al-kawākib) - Istanbul (SM Fatih 3439/11), - is mentioned in all three H1-3 where it is called: Book on Altitudes of Celestial Bodies (Maqāla fī irtifā'at al-kawākib).

A11. Book on Horizontal Sundials (Maqāla fī'l-rukhāma al-ufuqiyya) - Berlin (oct. 2970/14), Istanbul (Atıf 1714/6), Tehran (Tungabuni 110/1), is mentioned in all three H1-3.

A12. Book on Determining the Meridian with Extreme Accuracy (Maqāla fī istikhrāj khaṭṭ niṣf al-nahār 'ala ghāyat al-taḥqīq) - Berlin (oct, 2970/5), Istanbul (Atıf 1714/3), is mentioned in all three H1-3. Edition and research: Sezgin [18].

A13. Book on Doubts about Ptolemy (Maqāla fī'l-shukūk 'alā Baṭlamyūs) - Alexandria (ḥisāb. 2057/4), Oxford (I 877/9), is mentioned in HS1 and HS3. Description of the Alexandria manuscript: Sayyid [2] (90-91). Research: Pines [10], Edition: Sabra and Shahabi [1]. English translation: Sabra [25]. Research: Langermann [3](8-10). Research: Samsó [36].

A14. Resolution of Doubts about the Work "Almagest" which are difficult for some People of Science (Ḥall shukūk fī kitāb al-Majisṭī yashukku fīhā ba'ḍ ahl al-'ilm) - Aligarh (Azad 'Abd al-Ḥayy 21), Algiers (1446/1), Berlin (oct. 3548/1), Istanbul (BU Veliyuddin 2304; SM Fatih 3439/10 – chapter on critique of (No 187) Ibn Ma'dān, is mentioned in all three (H1-H3). Research: Goldstein and Sawyer [1].

A15. Determining the Meridian by a Shadow (Fī istikhrāj khaṭṭ niṣf al-nahār bi-ẓill wāḥid) - Berlin (oct. 2970/4), Istanbul (Atıf 1714/2), Tehran (Malik 3086/4), is mentioned in all three H1-3. Research: Kennedy [47].

A16. Book on the Form of the Universe (Kitāb fī hay'at al-'ālam) - Kastamonu (2298), London (Ind. 734/15), Princeton (Yehuda 1168), Rabat (Malik 8691), is mentioned in all three H1-3. Turkish translation by al-Bukhari: Manisa (1705/3). Edition, English translation, and research: Langermann [3], German translation: Kohl [3]. Latin translation: Millas Vallicrosa [4] (285-312). Research: Kohl [2], Mancha [1], Schramm [1] (63-70), Steinschneider [7]. Strohmaier [3], Wiedemann [183]. In this treatise, movements of the Sun, the Moon, and the planets are described according to Ptolemy's "Planetary Hypotheses" and al-Farghani's work (No 67, A1) as movements in massive celestial spheres.

A17. Determining Astronomical Operations with more Accuracy (Fī taṣḥīḥ al-a'mal al-nujūmiyya) - Oxford (I 877/8), is mentioned in all three H1-3.

A18. Book on the Essence of Traces which are seen on the Surface of the Moon (Maqāla fī māhiyat al-āthār allatī taẓharu fī wajh al-qamar) - Alexandria (Mun. 2096), Berlin (IGMN II 19), Cairo (ṭabī'iyyāt 425, Taymūr

78), is mentioned in all three H1-3. Edition: Sabra [19] (166-178). German translation: Schoy [28]. Research: Abel [1], Omar [2], Sabra [19], Schoy [28].

A19. Poem [with Rhyme] on the letter `Ayn on Determining the Qibla, Time, and Ascensions (al-Qaṣīda al-`ayniyya fī ma`rifat al-Qibla wa'l-awqāt wa'l-ṭawāli`) - Escorial (II 976/2), is not mentioned in all three H1-3.

A20. [Poem on the Entry of the Sun into Lunar Stations] - Princeton (Yehuda 1168), is not mentioned in all three H1-3.

A21. Book of Warning on Errors in [Astronomical] Observations (Maqāla fī'l-tanbīh `alā mawāḍi` al-ghalaṭ fī kayfiyyat al-raṣad) - Alexandria (ḥisāb 61; Mun. 2099), is mentioned in all three H1-3. Research: Sabra [22].

A22. Book on Properties of Observations (Maqāla fī kayfiyyat al-arṣād) - Alexandria (ḥisāb 42/1, Mun. 3688), Dublin (Beatty 4549); is mentioned in all three H1-3. Research: Sabra [22].

A23. Book on what is Visible from the Heaven is more than its half (Maqāla fī anna mā yurā min al-samā huwa akthar min niṣfihā) - Alexandria (Mun. 2099) Oxford (I 913/16, Marsh 720). Research: Heinen [2], is mentioned in all three H1-3.

A24. Book on the Visibility of Celestial Bodies (Maqāla fī ru'yat al-kawākib) - Tehran (Milli 799; Univ. 493). Edition and English translation: Sabra and Heinen [1]. Research: Sabra [37], Sabra and Heinen [1].

HS1 and HS3 mention his astronomical works:

A25. Concise Book on the the Azimuth of Qibla (Maqāla mukhtaṣara fī samt al-Qibla).

A26. Book on the Milky Way (Maqāla fī'l-majarra).

A27. Book on Ratios of Arcs of Temporal [Hours] to their Altitudes (Maqāla fī nisab al-qisiy al-zamāniyya ilā irtifā`ihā). Treatise on dependence of temporal hours from the altitude of the Pole, that is, from the latitude of the place of observation.

A28. Book on Surrounding Movement (Maqāla fī ḥarakat al-iltifāf).

A29. Book on the Azimuth (Maqāla fī'l-samt) is mentioned in all three H1-3.

A30. Book of Commentary on "Canon" in the Form of Scholias (Maqāla fī sharḥ al-Qānūn `alā ṭarīq al-ta`līq), is mentioned in HS3. Apparently, commentary on "Canon" of Theon.

Me1. Book on the Construction of Clepsydra (Maqāla fī `amal al-binkām) - Istanbul (AM 3025; Atıf 1714/8; SM Fatih 3439/8) - is mentioned in HS1 and not mentioned in HS3.

Me2. [Treatise on Building of the Tall Dam on the Nile] - is mentioned by al-Bayhaqī.

Me3. Book on Centers of Gravity (Maqāla fī marākiz al-athqāl) - is mentioned in all three H1-3. Is quoted in (No 476, Me1) of al-Khāzinī. Russian translation: al-Khāzinī [2] (83-88). Edition: al-Khāzinī [1] (16-20). Russian translation al-Khāzinī [2] (26-28).

Me4. Reasoning on Lever Balance (Qawl fī'l-qarasṭūn) - is mentioned in HS1 and not mentioned in HS3. Aleppo (Basil 724).

Ph1. Book on Optics (Kitāb al-manāẓir) - Istanbul (SM AS 2448, Fatih 3212 - Book I, 3213 - Book II, 3214 - Book III, 3215-3216 - Books IV and V, 3217 - Book VII; TK 3339 - Book VI; Köprülü 952 - incomplete), is mentioned in HS1and HS3. Revision of this work by Kamāl al-Dīn al-Fārisī: (No 674, Ph1). Edition of Sabra: Ibn al-Haytham [14] (Books I-III), [15] (books IV-VII). Medieval Latin translation published by Risner under the title "Opticae Thesaurus" (Treasury of Optics): Ibn al-Haytham [1], its photo-reproduction: Ibn al-Haytham [9]. German translation of the chapters 1-IV of book I (from Risner's translation): Wiedemann [128] (18-52). French translation of the chapter on sight: Trouessar [1] (223-255). English translations of fragments on sight and reflection by Lindberg: Grant [2] (400-405, 418-423). English translation by Sabra of Books I-III: Ibn al-Haytham [14]. Edition of a Medieval Latin translation and English translation. A. M. Smith [5]. Research: Federici Vescovini [1] (113-132), Gurova [1-2], Kohl [1], Kryuchkova [1], Lindberg [1, 5], [8] (17-19), [9] (58-86), Lobzova [1], Nazif [1, 3, 8], Omar [1, 3], Orlova [5], Rashed [3, 15], Ronchi [1], Sabra [2-3, 6, 10, 18, 24, 28-29, 33], by Sabra: Ibn al-Haytham [16], Sarton [4], Schnaase [1], G. Simon [1], A. M. Smith [1, 3], Stiegler [1-2], Tanaka [1], Wiedemann [8, 128]. On the "Alhazen's Problem": Amir-Moèz [2], Baker [1], Bode [1], Bruins [1], Eastwood [1], Hafner [1], Lohne [3], Sokolova [1]. On the role of this work in the history of psychology: Bauer [1], Yaroshevskiy [1], on the role of this work in the history of psychology: G. Simon [2].
7 books: 1) sight and eye, 2) spreading of light, 3) errors of sight, 4) reflection and mirrors, 5) imagination, 6) errors of sight from reflection, 7) refraction. In Book I, the "mathematical theory of vision" of Euclid and Ptolemy is criticized, according to which vision occurs through "optical rays" issuing from the eyes; this theory is replaced by "physical theory of sight", according to which the sight is realized by light rays issuing from sources of light, and anatomy of the eye is discussed. In Book II the psychology of vision is considered. In Book V the mathematical "Alhazen's Problem" is solved.

Ph2. Book on Light (Maqāla fīl-ḍaw')–Aleppo (Basil 718.), Beirut (218), Berlin (5668/1, oct. 2970/15), Istanbul (Atıf 1714/11; SM Fatih 3439/6), London (Ind. 734/4), Teheran (2998), is mentioned in all three H1-3.

Description of the London manuscript: Winter [7] (79). Editions: Ibn al-Haytham [3], [4] (No 2). Edition of the Berlin manuscript and its German translation: Baarmann [1], corrections to this translation: Wiedemann [6, 9]. English translations by Zaydi and Qurayshi: "Ibn al-Haytham" [1] (215-220, 270-279). French translation: Rashed [1]. Urdu translation by Nadwi: Ibn al-Haytham [7] (55-74). Research: Rashed [1], Wiedemann [6, 9].

Ph3. Book on Light of Stars (Kitāb fī ḍaw` al-kawākib) - Aleppo (Basil 721), Berlin (5668, oct. 2970/16), Istanbul (Atıf 1714/12, SM Fatih 3439/5), Jerusalem (Khalid. 31/2), London (Ind. 734/3), Oxford (I 877/7), St. Petersburg (Nat. ANS 600/8), Tehran (2998, 6431/6), is mentioned in all three H1-3. English translation: Winter and Arafat [3]. German translation and research: Wiedemann [14]. Description of the London and Oxford manuscripts: Winter [7] (77-78). Edition: Ibn al-Haytham [4] (No I), English translation by Askari: "Ibn al-Haytham" [1] (221-223). Urdu translation by Nadwi: Ibn al-Haytham [7] (75-81). Research: Taha [1]. It was proved that the light of fixed stars and Mercury and Venus is not reflected from the Sun but emanates directly from these celestial bodies.

Ph4. On the Light of the Moon (Fi'l-ḍaw` al-qamar) - Aleppo (Basil 720), London (Ind. 734/9), St. Petersburg (Nat. ANS 600/3), is mentioned in all three H1-3. Edition: Ibn al-Haytham [4] (No 8). German translation: Kohl [4]. English translation by Chaudri: "Ibn al-Haytham" [1] (203-214). Urdu translation by Nadwi: Ibn al-Haytham [7] (15-54). Research: Kohl [4], Sabra [32].

Ph5. On Burning Sphere (Fil-kura al-mutaḥarriqa) - Berlin (oct. 2970/8, 3548/8), Istanbul (Atıf 1714/10), Leiden (1064) ; is mentioned in HS1and HS3. German translation according the exposition of al-Fārisī: Wiedemann [36]. Research: Wiedemann [13, 36].

Ph6. Book on Burning Mirrors by [Conic] Sections (Maqāla fi'l-marāyā al-muḥriqa bi'l-quṭū`) - Aligarh (Azad `Abd al-Hayy 678), Berlin (oct. 2979/7), Florence (Lor. 152), Hyderabad (jadid 4199, Salar hay'a 31/2), Leiden (14/13), London (Ind. 734/5); is mentioned in all three H1-3. Description of the London manuscript: Winter [7] (83). Edition: Ibn al-Haytham [4] (No 3), Latin and German translations: Heiberg and Wiedemann [1]. English translations: Winter and Arafat [1], by Rana: "Ibn al-Haytham" [1] (255-259). Russian translation by Mohammed and Orlova: Ibn al-Haytham [11] (306-320). Urdu translation by Zaydi: Ibn al-Haytham [7] (131-143). Research: Rashed [52], Rosenfeld and Orlova: Ibn al-Haytham [11], Winter and Arafat [1],

Ph7. Book on Burning Mirrors by Circles (Maqāla fi'l-marāyā al-muḥriqa bi'l-dawā'ir) - Aligarh (Azad `Abd al-Hayy 678), Berlin (oct. 2970/7), Hyderabad (jadid 2196, Salar hay'a 31/3), Istanbul (Atıf 1714/9), London (Ind. 734/6); is mentioned in all three H1-3. Description of the London manuscript: Winter [7] (82). Edition: Ibn al-Haytham [4] (IV). English translation by Winter and Arafat: Ibn al-Haytham [4a]. Russian translation by Mohammed and Orlova: Ibn al-Haytham [11] (320-335). Research: by Rosenfeld and Orlova: Ibn al-Haytham [11], Wiedemann [111], by Winter and Arafat; Ibn al-Haytham [4a].

Ph8. Treatise on Forms of Eclipses (Maqāla fī ṣuwar al-kusūf) - Istanbul (SM Fatih 3439/3), London (Ind. 461/2, 734/13, 767/2, 1270), Oxford (I 877/2), St. Petersburg (B 1030/2; Nat. ANS 600/4); is mentioned in HS1 and HS3. Description of the London and Oxford manuscripts: Winter [7] (80-81). German translation: Wiedemann [57]. Research: Wiedemann [55, 121], Würschmidt [3-4]. Treatise on the theory of camera obscura, the first right explanation of its effect in the history of physics.

Ph9. On Halo and Rainbow (Fi'l-hāla wa qaws quzah) – Aleppo (Basil 719). Berlin (oct. 2970/10), Istanbul (Atıf 1714/14), Jaipur (17/2), Najaf (Ayatallah 213); is mentioned in all three H1-3. Research: Rashed [2], Wiedemann [54], Würschmidt [2].

Ph10. Book on Properties of Shadows (Kitāb fi kayfiyyat al-aẓlāl) - Berlin (5668, 6019), Isfahan (Univ. 17435), Istanbul (AM 3025, Atıf 1714/5, SM Fatih 3439/4), St. Petersburg (Nat. ANS 600/9), Tehran (2996); is mentioned in all three H1-3. Research: Wiedemann [30].

Ph11. Book on Optics by the Method of Ptolemy (maqāla fi'l-manāẓir `ala ṭarīqat Baṭlamyūs) - is mentioned in all three H1-3. In this book Ibn al-Haytham, unlike in Ph1, believed that sight is realized by "optical rays" issuing from the eyes.

Mu1. Book on Commentary on "Harmonics" in the Form of Scholias (Maqāla fī sharḥ Armunīqā `alā ṭarīq al-ta`līq) - is mentioned in both HS1-3, apparently, it is a commentary on Ptolemy's "Harmonics".

329. `ALA AL-KIRMANI

Abū'l-Qāsim `Alā [al-Dīn] al-Kirmānī (10-11th c.) from Kerman, physician and astrologer.

See: GAS (VII 193-194), MAA (95), MAMS (II 255), PL (II 66), UA (II 8); Pingree [47] (EIr).

A1. Treatise on the Description of a New Globe (Risāla dar ṣifat-i kura-yi jadīd) P - Leiden (1589), Paris (793). Description of the Paris manuscript: Blochet [2] (I 70).

A2. On Elements of Predictions [of Stars] (Fī uṣūl al-aḥkām) - Oxford (I 944/5).

330. AL-KHAQANI AL-MUNAJJIM

Al-Khāqānī al-Munajjim (d. ca 1040), astronomer and astrologer, author of tables.
See: MAA (95), MAMS (II 255), TH (181).

331. MUHAMMAD AL-QUMMI

Muḥammad ibn Aḥmad ibn Muḥammad al-Qummī (10-11th c.) from Qumm, mathematician.
See: GAL² (I 389), GAS (V 336, 403, VII 410), MAA (95), MAMS (II 255), SSM (45).
M1. Treatise on the Possibility of the Existence of two lines which always aproach but do not meet (Risāla fī imkān wujūd al-khaṭṭayn alladhayn yaqtaribān abadan wa lā yaltaqiyān) = Treatise on the Explanation of Two Lines (Risāla fī ibānat al-khaṭṭayn) - Cairo (falak 4528/2, riyāḍa 898/7) - under the first title, Dublin (Beatty 5255/3) - under the second title, Leiden (14/7), Mashhad (5521) - under the first title, New York (Columb. 30/12, 45) - under the first title. Treatise on asymptotes.
M2. [Objection to al-Karajī] - Mashhad (5593/4).

332. MUHAMMAD IBN AL-SHIQAQ

Abū Bakr Muḥammad ibn Marwān ibn `Īsā al-Umawī (d. 1041), was known by the name "Ibn al-Shiqaq", worked in Cordoba; knew linguistics and arithmetic well.
See: MAA (95), MAMS (II 256); Ibn al-Faraḍī [1] (II 102).

333. MUHAMMAD IBN MAZIN

Abū `Abdallāh Muḥammad ibn `Abdallāh ibn Mazīn (959-1042), lived in Cordoba and Seville; arithmetician and scholar of Qur'anic studies.
See: MAA (95), MAMS (II 256); Ibn al-Faraḍī [1] (II 104).

334. `ALI IBN KHALAF

Abū'l-Ḥasan `Alī ibn Khalaf ibn Ghālib al-Anṣarī (11th c.), a Sufi from Cordoba. Constructor of astronomical instruments; he was an arithmetician, also knowledgeable in inheritance.
See: MAA (96, 214), MAMS (II 256, III 366); Calvo [4], Ibn al-Abbār [1] (II 672), Vera [1] (III 195-196)
A1. [Treatise on the use of Astronomical Instruments]. Spanish translation: Madrid (L 97).
Edition: Alfonso X [1] (III 1-132). Treatise contains an exposition of the construction and use of universal tympanum (lámina universal) invented by Ibn Khalaf. Apparently a kind of astrolabe "zarqala"; see (No 269, A3) al-Khujandī and (No 402, A1) al Zarqalī.

335. YUSUF AL-JUHANI

Yūsuf ibn `Umar al-Juhanī (d. 1044), from Toledo; was known by the name "Ibn Abī Thalla"; he was knowledgeable in literature, inheritance and astronomy.
See: MAA (96, 214), MAMS (II 256); Ibn Bashkuwāl [1] (II 615).

336. ABU BAKR

Abū Bakr (first half of 11th c.), mathematician.
See: GAS (V 396), MAMS (II 256-257).
M1. Various Geometric Problems (Masā'il mutafarriqa handasiyya) - Berlin (IGMN I. 24). Research: Schoy [29]. 12 problems, some of which are borrowed from Ibn Qurra (No 103), al-Khujandī (No 269), al-Kūhī (No 277), Ibn al-Haytham (No 328), and from the non-extant Euclid's book "On Division".

337. ABU BAKR IBN `ABIS

Abū Bakr ibn `Ābis (10-11th c.), mathematician.
See: GAS (V 392), MAMS (II 257).
M1. Book on the Determination of Distances (Kitāb fī akhdh al-ab`ād) - Istanbul (SM AS 4830/14).

338. KHALID AL-ADIB

Abū Walīd Khālid ibn Muḥammad ibn `Abdallāh al-Adīb (995-1045), from Seville, pupil of al-Ghāfiqī (No 312); knew arithmetic and poetry well. He was killed in Badajos.

See: MAA (96), MAMS (II 257); Ibn Bashkuwāl [1] (I 181).

339. `ABDALLAH AL-SARAQUSTI

`Abdallāh ibn Aḥmad al-Saraqusṭī (d. 1056), from Zaragoza, mathematician and astronomer, worked in Valencia.

See: GAS (V 391), MAMS (II 257); Tuqan [1] (344).

A1. Treatise (Risāla) - is mentioned in the work (No 384, H1) by al-Andalusī [1] (72). The treatise contains a critique the theory of movement on planets in "Sindhind".

340. MUHAMMAD AL-JAYYANI

Abū `Abdallāh Muḥammad ibn Yūsuf ibn Aḥmad ibn Mu`ādh al-Jayyānī (989-1079), from Jaen (Jayyān); studied in Egypt in 1012-1016, later was judge, jurist, and vizier in Seville. In medieval Europe he was known as "Abhomadi Malfegeyr".

See: GAL² (I 860), GAS (V 49, 109, 364), IHS (II 324), MAA (96), MAA² (170), MAMS (II 257-258, III 366), SSM (135); Dold-Samplonius and Hermelink [1] (DSB), Ibn Bashkuwāl [1] (II 480), Goldstein [11], Kapp [1] (II 77), Kennedy [51], Lindberg [8] (15-16), Saliba [16], Samsó [25] (LM), A. M. Smith [4] (ENWC), Wüstenfeld [3] (66).

M1. Book on Explanation of Ratios (Maqāla fī sharḥ al-nisba) - Algiers (1446/3). Facsimile edition of the manuscript and English translation: Plooij [1] (15-47). Research: MA (83-89); Matviyevskaya [5] (250-251), Plooij [1], Vahabzadeh [1]. Commentary on the definitions of Book V of Euclid's "Elements". Al-Jayyānī proposes another definition by means of the Euclid algorithm (proposed in antiquity by Thaetetus), besides Eudoxus' definition of equality of ratios, considered by Euclid, .

M2. Book on unknown Arcs of Sphere (Kitāb majhūlāt qisiy al-kura) = Book on Determining the Magnitudes of Arcs Which Are on the Surface of a Sphere (Kitāb istikhrāj maqādīr al-qisiy al-wāqi`a `alā ẓahr al-kura) - Florence (152/6) - under the second title, Escorial (I 955/1) - under the first title. Description of the Florence manuscript: Sabra [20] (281). Description of the Escorial manuscript: Derenbourg [7] (94-95). Research: Sabra [20] (281), Samsó [14], Villuendas [1-2]. The first treatise in the history of mathematics specifically devoted to spherical trigonometry in 4 chapters: 1) theorem on complete spherical quadrilateral (Menelaus theorem), 2) generalizations of this theorem, 3) theorems on chords, 4) solution of spherical triangles.

A1. Jayyān Zīj (Tabulae Jahen) - only medieval Latin translation by Gherard of Cremona is extant. Research: Dondel [1], Hermelink [5].

A2. [Treatise on the Construction of the Astrolabe] - Berlin (5807 - anonymous), Cairo (Halim mīqāt 19/2, Ṭal`at mīqāt 155/6 - a fragment). Treatise was written in Cordoba.

A3. [On a Solar Eclipse] - Escorial (I 955).

Me1. Book of Secrets about the Results of Thoughts (Kitāb al-asrār fī natā'ij al-afkār) - Florence (Med. 152/1). Research: Casulleras [1], Hill [3], Sabra [20], Vernet, Casals, and Villuendas [1]. Treatise on mechanical devices.

Mt1. Book on Twilights and Rising Clouds (De crepusculis et nubium ascensionibus liber unus). Editions of the Latin translation by Gherard of Cremona who ascribed this treatise to Ibn al-Haytham (No 328): Ibn al-Haytham [1] (283-288), Nuñez [1-2], [3] (128-143). Research: Goldstein [9], Hellman [1] (87-104), Nuñez [3] (365-375 - research by Joachim de Carvalho), Sabra [4] (establishment of the authorship of al-Jayyānī), Smith [1], Yushkevich: MA (137 - research of a mathematical problem).

341. `ALI AL-NASAWI

Abu'l-Ḥasan `alī ibn Aḥmad al-Nasawī (ca 970 - ca 1070), from Nasa (near modern Ashqabad in Turkmenistan, ancient Nisa, the capital of Parthia), pupil of Kushyar ibn Labbān (No 308), worked in Rayy and Isfahan at the court of Buyid Sultan Majd al-Dawla (997-1029); after 1029, when Rayy was conquerred by Maḥmūd Ghaznawi, he worked in Ghazna at the court of Sultans Maḥmūd (998-1030) and Mas`ūd (1030-1949), after the collapse of Ghaznawid empire, he worked at the court of Seljuk sultans in Isfahan.

See: GAL[2] (I 390), GAS (III 311, V 345-348, 404, VI 245-246, VII 182, 410-411), IHS (I 719), KZ (III 564, V 144, VI 29, 308-309), MA (19-22, 24-25, 76, 78), MAA (86-93), MAMS (II 259-262), SSM (45); Atagharryyev and Khayretdiniva [1], al-Bayhaqī [1] (109-110), [5] (74), Qurbani [4], Sa`idan [14] (DSB), Sadiqi [1], Tuqan (I 290-293).

M1. Abridgement of Euclid (Tajrīd Uqlīdis) = Abridgement of "Elements of Geometry" (Tajrīd fī uṣūl al-handasa) - Damascus (4871), Hyderabad (Salar 3142), Rampur (I 417, 3079/1). Description of the Hyderabad manuscript: Sayyid [1] (22-23). Revision of Euclid's "Elements" in 7 books.

M2. Commentary on "Book of Lemmas" of Archimedes (Sharḥ kitāb al-Ma`khūdhāt li Arshimīdis) - Istanbul (SM Fatih 3414), Mashhad (5617), St. Petersburg (Nat. Firk. 144). al-Ṭūsī (No 606, M2) made a revision of this work. Medieval Latin translation where al-Nasawī is called "Abilhasan Hali ben Ahmad Nasuensis": Archimedes [1], [3] (II 510-525). Russian translations by Petrushevskiy and Veselovskiy from the Latin translation mentioned: Archimedes [2], [4] (391-400).

M3. Sufficient on Hindu Reckoning (al-Muqni` fī'l-ḥisāb al-hindī) - Leiden (556/6). Facsimile edition of the manuscript: Qurbani [4] (121-145). Russian translation by Medovoy: al-Nasawī [1], French translation of the introduction: Woepcke [14] (489-500), partial German translations: Suter [26], Luckey [5]. Research: Woepcke [14], Suter [26], Luckey [5]. Treatise in 4 books: 1) arithmetic of integers, 2) arithmetic of fractions, 3) arithmetic of integers with fractions, 4) arithmetic of sexagesimal fractions, Treatise is similar to (No 308, M1) of Ibn Labbān. Extraction of cubic roots, like in (No 308, M1) is realized by the method coinciding with Ruffini-Horner method. The treatise first was written in Persian for Majd al-Dawla, and later in Arabic for Sultan Maḥmūd Ghaznawi.

M4. Book of Saturation on the Explanation of the Figure of Secants (Kitāb al-ishbā` fī sharḥ al-shakl al-qaṭṭā`) - Istanbul (TK 3464/14, Haz. 455/2), Leiden (556/4). German translation of the foreword by Wiedemann: Schirmer [1] (80-85). Research: Bürger and Kohl [1], Schirmer [1]. Exposition of the theory of composed ratios and proof of the spherical Menelaus theorem. In the foreword Ptolemy, Sulayman ibn `Isma (No 181, M3), al-Nayrīzī (No 135, M4), al-Fārābī (No 180, A1), Ibn Qurra (No 103, M9), al-Khāzin (No 194, M4), and Ibn Sīnā (No 317, E1) are listed as forerunners.

M5. al-Nasawī's authorship of the anonymous "Collection of Rules of the Science of Astronomy" is plausible. (Jāmi` qawānīn `ilm al-hay`a) - Istanbul (TK 3342/1), written in Isfahan and dedicated to `Amid al-Mulk Abū Nasr Mansur ibn Muhammad, probably also called al-Kundurī (1025-1064), the vizier of Seljuk sultans in Isfahan. Description of the manuscript: SHIM (511) (Krause believes that the author of this work was al-Salār, (No 593). Russian translation of the chapter III by Khayretdinova: "Sobraniye pravil" [1]. Research: Khayretdinova [1-2] (she believes that the author of this work was Khayyām (No 420). The work is devoted to the same problems as M4.

M6. Sufficient Commentary on the Book of Euclid (al-Bāligh fī sharḥ kitāb Uqlīdis) - is mentioned by Ibn Labbān in (No 308, M3).

M7. Book on the Construction of Circle whose Ratio to a given Circle is the given Ratio (Maqāla fī `amal dā'ira nisbatuhā ilā dā'ira mafrūḍa ka nisba mafrūḍa) - is mentioned in the work (No 606, M5): al-Ṭūsī [15] (No 3, 10-14).

A1. Treatise on the Knowledge of the Calendar and the Astrolabe (Risāla fī ma`rifat al-taqwīm wa'l-asṭurlāb) - New York (Columb. 45/7).

A2. Zīj of Fakhir (al-Zīj al-Fākhir) - is mentioned by al-Bayhaqī [1]. Persian translation of a fragment by al-Nasawi's pupil Razi is extant in his work (No 467, A1). Photo-reproduction: SSM (233).

342. ABU'L-JUD IBN AL-LAYTH

Abū'l-Jūd Muḥammad ibn al-Layth (10-11th c.), mathematician.

See: GAL (I 619-620), GAL[2] (I 854), GAS (V 353-355, VII 411), IHS (I 718), MAA (97), MAMS (II 260-262), SSM (46); J. Puig [1], Qurbani [1] (214-220), Schoy [29], Tuqan [1] (344).

M1. Letter to Distinguished Scientist Abū Muhammad `Abdallah al-Ḥāsib on the Indication of Methods of Scientist Abū Sahl al-Kūhī, the Geometer, and Sheikh Abū Ḥāmid al-Ṣaghānī, and His [Own] Method, followed in the Construction of Equilateral Heptagon Inscribed into a Circle (Risāla ilā'l-ustādh al-fāḍil Abī Muḥammad `Abdallāh al-Ḥāsib fī'l-dalāla `alā ṭarīqay al-ustādh Abī Sahl al-Kūhī al-muhandis wa'l-sheikh Abī Ḥāmid al-Ṣaghānī wa ṭarīqihī allatī salakahā fī `amal al-musabba` al-mutasāwī al-aḍlā` fī'l-dā'ira) - Oxford (I 143/31, 186, 987/35), Paris (4281/6). Research: Hogendijk [5]. Treatise on methods of constructing the regular heptagon of al-Kūhī (No 277, M9), al-Ṣaghānī (No 223, M1), and Abū'l-Jūd himself.

M2. Book on the Construction of a Heptagon inscribed in a Circle (Kitāb fī `amal al-musabba` fī'l-dā'ira) - Berlin (IGMN I. 19), Cairo (Fāḍil riyāḍa 41/17). Treatise on the construction of a regular heptagon was ascribed earlier to (No 302) Ibn Sahl; the authorship was established by Anbuba [5] (373). Research: Anbuba [5], Hogendijk [5].

M3. Answer of Distinguished al-Sheikh Abū'l-Jūd Muḥammad ibn al-Layth for Questions Proposed Him by Distinguished Brother Abū'l-Rayḥān Muḥammad ibn Aḥmad al-Bīrūnī (Jawāb al-sheikh al-fāḍil Abī'l-Jūd Muḥammad ibn al-Layth `ammā sa'alahū al-akh al-fāḍil Abū'l-Rayḥān Muḥammad ibn Aḥmad al-Bīrūnī) - Leiden (168/4). Answer to al-Bīrūnī (No 348). Research of the 1st and 2nd questions by Woepcke: Khayyām [1] (114-115, 125-126), research of the 3rd question: Hogendijk [13].

M4. [Answers to Abū Ja`far al-Khāzin's questions in Geometry] - Leiden (168/12). Answer to al-Khāzin (No 194).

M5. [On Geometric Problem of Abū Sa`īd al-Sijzī and Abū Sahl al-Kūhī] - Leiden (168/13). Treatise on problems of (No 277) al-Kūhī and (No 296) al-Sijzī.

M6. [On Properties of the Rectangular Triangle with Rational Sides] - Leiden (168/14). Treatise on rational Pythagorean triples.

M7. Book on Three Geometric Problems (Maqāla fī thalāthat masā'il handasiyya) - Berlin (IGMN I 20-21), Cairo (Fāḍil riyāḍa 41/10), Leiden (168/10). German translation: Schoy [28]. Solution of three planimetric problems.

M8. Book on Synthesis of Problems Analyzed by Abū Sa`d al-`Alā ibn Sahl (Kitāb tarkīb al-masā'il allatī ḥallalahā Abū Sa`d al-`Alā ibn Sahl) - Cairo (Fāḍil riyāḍa 41/18). Research: Hogendijk [5]. Synthesis of problems analyzed in (No 302, M2) by ibn Sahl.

M8a. Book on Measuring a Triangle by Its Sides (Maqāla fī misāḥat al-muthallath min jihat aḍlā`ihī) - Paris (483/4).

M8b. Treatise (Risāla) - Paris (482/1)

M9. Answer to the question of Abū Bakr Muḥammad ibn Ya`qūb al-Shamsī on a Triangle whose One Angle is right and the other is known (Jawāb <`an> su'āl li-Abī Bakr Muḥammad ibn Ya`qūb al-Shamsī `an al-muthallath iḥdā al-zawāyā qā'ima wa ukhra ma`lūma) - Leiden (168/11). Research: Hogendijk [5].

M10. [Treatise on Conic Sections] - is quoted in (No 420, M2) by Khayyām [25] (109-110)

M11. [Book on the Solution of a Problem of Menelaus] - is mentioned in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 91): this problem on inscription of a broken line equal to the given segment in a semicircle was solved by Menelaus in the Proposition III2 of his lost "Elements of Geometry". Al-Bīrūnī believes that the solution of Abū'l-Jūd is too complicated.

343. ABU'L-HASAN AL-MISRI AL-SAMARKANDI

Abū'l-Ḥasan al-Miṣrī al-Samarkandī (10-11th c.) was born in Egypt. He was apparently a mathematician and worked in Samarkand.

See: MAMS (II 262).

M1. [Geometric Treatise] - is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 76-77). Russian translations on this fragment: Bulgakov - al-Bīrūnī [50] (43), Krasnova and Karpova - al-Bīrūnī [23] (109) (absent in Suter [34]).

344. MUHAMMAD AL-SHANNI

Abū `Abdallāh Muḥammad ibn Aḥmad al-Shannī (10-11th c.), Egyptian mathematician.

See: GAL2 (I 854), GAS (V 352, VII 411), MAA (97-98), MAMS (II 262-263), SSM (46).

M1. Book Revealing the Errors of Abū'l-Jūd in his two Premises for the Construction of the Heptagon (Kitāb kashf tamwīh Abī'l-Jūd fī mā qaddamahū min al-muqaddimatayn li-`amal al-musabba`) - Beirut (Greek. 364/5), Cairo (Fāḍil riyāḍa 41/19). Research: Hogendijk [5].

M2. Book on the Measurement of any Triangle with Different Sides by its sides (Kitāb misāḥat kull muthallath mukhtalif al-aḍlā` min jihat aḍlā`ihī) - Beirut (Greek. 364/4), Cairo (Fāḍil riyāḍa 41/24), Paris (483/4). Description of the Beirut manuscript and research: Kennedy [1].

M3. Book on the Measurement of any Triangle with Different Sides by its sides (Kitāb misāḥat kull muthallath mukhtalif al-aḍlā` min jihat aḍlā`ihī) - Cairo (Fāḍil riyāḍa 41/23). Treatise does not coincide with M2.

M4. Book on the Measurement of a Triangle According to Surpluses and the Measurement of the Quadrangle Inscribed in a Circle] - is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 104-106, 114-118). Proof of Hero's formula for area (S) of a triangle with sides (a, b, and c): ($S=\sqrt{p(p-a)(p-b)(p-c)}$) where ($p=\frac{1}{2}(a+b+c)$) and Brahmagupta's formula for area (S) of a quadrangle with sides (a, b, c, and d) inscribed in a circle ($S=\sqrt{(p-a)(p-b)(p-c)(p-d)}$) where ($p=\frac{1}{2}(a+b+c+d)$), probably, also proved in M2. German translation of the proofs of these formulas: Suter [34] (39-42), Russian translations of these proofs: Bulgakov - al-Bīrūnī [50] (53-56), Krasnova and Karpova - al-Bīrūnī [23] (119-122) and Archimedes [4] (419-421).

M5. [Trigonometrical Treatise] - is mentioned in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 42-43, 49, 70, 87-90, 97-98). German translation of these fragments: Suter [34] (18-21), Russian translations of these fragments: Bulgakov - al-Bīrūnī [50] (31, 33, 41, 47, 50-51), Krasnova and Karpova - al-Bīrūnī [23] (97, 99, 107, 112-113, 116).

M6. [Treatise on Parallel Lines] - is mentioned in the geometric treatise (No 420, M3) by Khayyām [25] (114).

345. ADHARKHURA-YI YAZDANKHASIS

Abū'l-Ḥasan Ādharkhūrā-yi Yazdānkhasīs Jashnis (9-10th c.), Persian, Zoroastrian who converted to Islam (Ādharkhūrā is the name of famous Zoroastrian fire-temple in Fars) see al-Bīrūnī [2] (215), (ādhar = fire, yazdān = god), geometer; al-Bīrūnī found the information about the ancient Persian customs and legends from him (see al-Bīrūnī [2] 54, 107, 204).

See: GAS (V 342), MAMS (II 263).

M1. [Geometric Treatise] - is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, (36, 52). German translation of these fragments: Suter [34] (14, 20), Russian translations of these fragments: Bulgakov - al-Bīrūnī [50] (29, 34-35), Krasnova and Karpova - al-Bīrūnī [23] (95, 100-101).

346. `ALI AL-QAINI

Abū'l-Ḥasan `Alī ibn `Abdallāh ibn Muḥammad ibn Bāmshādh al-Qāinī (10-11th c.), mathematician and astronomer from Qain, Khurasan.

See: GAS (V 337, 403, VI 242). MAMS (II 263-264), STMI (284); Lorch [15] (LM), Pingree [57] (EIr), Qurbani [3].

M1. [Geometric Treatise] - is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 37, 40-41). Russian translations of these fragments: Bulgakov - al-Bīrūnī [50] (42-44), Krasnova and Karpova - al-Bīrūnī [23] (108-110) (absent in Suter [43]). Research: Qurbani [3]. Two of al-Qaini's proofs of the Archimedes premise that if D is the middle of an arc ABC, then $AB \cdot BC = AD^2$.

A1. Determining the hours between the beginning of Dawn and the Rising of the Sun in any day of the year at the city of Qain (Fī istikhrāj sā`āt mā bayna ṭulū` al-fajr wa ṭulū` al-shams kulla yawmin min ayyām al-sana bi-madīnat Qāin) = Treatise on Determining the hours between the beginning of Dawn and Rising of the Sun or between Sunset and Twilight, as the knowledge of one of them determines the knowledge of the other. (Risāla fī istikhrāj sā`āt mā bayna ṭulū` al-fajr wa ṭulū` al-shams aw ghurūbihā wa ghurūb al-shafaq idh al-`ilm bi-aḥadayhimā yastalzimu al-`ilm bi'l-ākhar) - Oxford (I 913 - under the second title), Patna (2468/23 - under the first title). Edition of the Patha manuscript: "al-Rasā'il al-mutafarriqa" [1] (No 4), English translation and research: Davidian and Kennedy [1].

H1. Determination of the Era of Jews (Istikhrāj ta'rīkh al-yahūd) - Patna (2468/25).
Edition: "al-Rasā'il al-mutafarriqa" [1] (No 3).

347. MUSAFIR AL-MUQAWWI

Abū'l-Ḥasan Musāfir ibn al-Ḥasan al-Muqawwī (10-11th c.); sheikh, mathematician, astronomer and physicist. Al-Bīrūnī (No 348) dedicated "Shadows" A4 and works M14, M19, and A35 to him.

See: MAMS (II 264).

348. ABU'L-RAYHAN AL- BIRUNI

Abū'l-Rayḥān Muḥammad ibn Aḥmad al-Bīrūnī (973-1048), the most famous man of science and encyclopaedist in Medieval Islam, born in Kath, the old capital of Khwarizm (presently the town of Beruni named in his honour in Qara-Qalpaq, Republic of Uzbekistan), pupil of Ibn ʿIrāq (No 299). worked in Kath at the court of Afrigid Khwarizmshah ʿAbdallah Muḥammad (until 995), in Gurgan at the court of Ziyarid Shams al-Maʿālī Qābūs ibn Wushmagīr (978-1012), in Gurganj, the new capital of Khwarizm, at the court of Maʾmun II (1009-1017), and in Ghazna at the courts of Maḥmūd Ghaznawī (998-1030), Masʿūd (1031-1041) and Mawdūd (1041-1050); lived in India for some years where he went during the campaigns of Maḥmūd. In Medieval Europe was known as "Maître Aliboron".

See: AGL (244-261), GAL (I 782-784), GAL² (870-875), GAS (V 375-383, VI 261-276, VII 188-192, 288-292, 412-413, X), HD (348), HD² (229), HMA (480-482), IHS (707-709), KZ (I 154, 258, 272, 277, II 192, 288, 324, 385, 429, 608, III 254, 366, 512, 567-568, IV 80, 186, 501, V 33, 62, 110, 114, 386-388, 435, VI 53), MA (45, 83, 93, 137-139, 149-152), MAA (98-100), MAA² (170-172), MAMS (II 264-295, III 366-367), PI (IV 75-87), PL (44-45), SSM (47-48), STMI (288-289, 387), UA (II 20-21); Abdurahmanov [1, 4], Ahadova [9], I. Ahmad [1-3], N. Ahmad [3], S. Ali [1], Allana [1], Anawati a. o. [1], Ansari [1], Arnaldez [4], Auluck [1], Barani [1, 3, 5], al-Bayhaqī [1] (62-64), Belenitskiy [7, 9], Berggren [10] (9-12, 141-143, 146-147, 174-176, 182-186), Boilot [1] (EI²), [2-3], Brockelmann [7] (EI), Browne [3] (II 90-98, 101-105), Bulgakov [4, 6, 9, 11-14, 16], Bulgakov and Ahmedov [1], Carra de Vaux [20] (30-34), Chawushi [3], Courtois [1-2], Damardash [3], Dihkhuda [1], Fathnuri [1], Gafurov [1], Gankovskiy [1], Gardet [5], Gardner [1], F. Gökmen [2], S. Grigorian [1], Hana [1] (GWG), Hasanov [7] (64-135), Heinen [1], Hermelink [9], ʿInayatallah [1], Irisov [2, 4], Jalalov [4-4a], Jumabayev [1], P. E. Kahle [1], Karahan [3], U. Karimov [5], Kedrov [2], Kedrov and Rosenfeld [1], Kennedy [24] (DSB), [39a] (LM), Khayrullayev [1-2], Krafft [4] (GWG), Krause [3], Krenkow [1], Latif [1], Mamedbeyli and Marupov [1], Marupov [3, 6, 8], Maqbul Ahmad, Behari, and Subbarayappa [1], Massignon [2], Matviyevskaya [2, 12-13], Menon [1], Mieli [2] (98-102), Minorsky [3], Mīnowi [1], Muminov [4-13], Najibullah [1], Narqulov [1-2], Narkhujayev [1-6], Nasr [1, 6, 11a-12], Nasyrov [1, 3-4], Nawshervi [1], Nizamuddin [1-2], Nosirov [1-3], Olgun [1], Pope [1], Karahan [3], Quds [1], Qulmuradov [2], Qurbani [5], Rabbani [1], A. Rahman [2], Rashed [13], Raynov [1-2], Ritter [2], Rosenfeld, Krasnova and Rozhanskaya [1], Rosenfeld, Rozhanskaya and Sokolovskaya [1], Rosenthal [11], Rozhanskaya [7] (SeT), Rudzki [1], Sabirov and Ahmedov [1], Sachau [1-3], H. Sadyqov [1-6], Safa [1] (281-287), [4-5], Said [3], Said Khan [1-2], Said and Khan [1], Saʿidan [1, 36], Sajadi [1], Saliba [5, 20-21], Sal'ye [2, 5], Samian [1] (ENWC), Samsó [28], Sayılı [4], [18] (124-130), [23-24], [28], Semyonov [2, 6-8], Sen [3], Shahhat [1], Shamsi [2], Sharipov [1-2, 4-7, 9], Shawky [5], A. Siddiqi [1] (ENWC), Siddyqov [8] (32-40), Sirajdinov and Matviyevskaya [5], Sirajdinov, Matviyevskaya and Ahmedov [1-2], Souissi [6], U. Sultonov [3] (42-64), Suter, Wiedemann, and Rescher [1], I. al-Tabrizi [1], Tavadia [1-2], Tawanisi [1], Tolstov [1-4], Tuqan [1] (310-321), Turki and Guna [1], G. Umarov [1-2], T. Usmanov [1-2], Utsekha [2-3], Validi Togan and F. Gökmen [1] (IA), Volodarskiy [1], Wiedemann [45], [202] (EI), Wiedemann and Hell [1], Wilczynski [1], Yusuf [1], Zahuri [1], Zajaczkowski [1], V. Zahidov [1-4, 6], [7] (30-50), Zavadovskiy [5], Ziauddin [1], Zikrillayev [3, 7-10].

Memorial Collections and Collection of Papers: "al-Bīrūnī" [1-13].

HS1. "List of Works" - List of Works of Muḥammad ibn Zakariyā' al-Rāzī (Fihrist kutub Muḥammad ibn Zakariyā' al-Rāzī) - Leiden (133/2). Editions: Sachau [2] (40-48) (list of works of al-Bīrūnī), by Kraus: al-Bīrūnī [8]. German translations: Suter and Wiedemann [1] (list of works of al-Bīrūnī), Ruska [8] (list of works of al-Razi (No 142). Russian translation of the foreword by Sharipov: al-Bīrūnī [45]. Uzbeki translation of the list of works of al-Bīrūnī by Rasulev: al-Bīrūnī [39]. Research: Sal. Hamarneh [1], Iskander [3], Köbert [1], Krachkovskiy [5], Krafft [4] (GWG), Muhaqqiq [2, 4], Musahib [2], Ruska [8], Sharipov [8], Suter and Wiedemann [2]. Treatise contains lists of works of al-Bīrūnī's forerunner al-Rāzī (No 142) and of al-Bīrūnī himself.

E1. "Chronology" - Traces Remained from Past Generations (al-āthār al-bāqiyya min al-qurūn al-khāliyya) - Edinburgh (161), Gotha (1552/2), Istanbul (BU 4667; NO 4893; SM AS 2947; TK 3043), London (1495, Sup. 7491), Paris (1489), Patna (963), St. Petersburg (D 580), Tehran (6406, Malik 3891). Edition of the London manuscript by Sachau: al-Bīrūnī [1]. Other editions: al-Bīrūnī [11a, 25]. English translation by Sachau: al-Bīrūnī [2]. Russian translation by Sal'ye: al-Bīrūnī [15]. Persian translations by Iʿtidād al-Saltane and Dana Sirusht: al-Bīrūnī [5, 11]. Uzbeki translation by Rasulev: al-Bīrūnī [32]. Edition and Russian translation of the chapter on Africa: Kubbel' and Matveyev [2] (109-110). Research: I. Abdullayev [1], Adharnush [1], Fayzullayev [2], Fiorini [1] (projection of the sphere onto a plane), Fück [3] and Garbers [1] (supplements to the edition of Sachau). Irisov [2, 5], Jalalova [1-2] (movement of the Sun), Khalidov [1] (supplements to the

edition of Sal'ye), Pingree [62] (EIr), Sachau [1] (chess problem), [2], Salemann [2], Shcheglov [2], Tekeli [2] (movement of the Sun), Tolstov [3-4], Wiedemann [176-177] (meteorological chapters).
Book in 21 chapters: 1-5) days, months, years, and eras, 6) chronology of Biblical Patriarchs, Babylonian and Assyrian kings, Egyptian Ptolemaic kings, Roman and Byzantine emperors, Persian kings from Achaemenids to Sasanids, kings of various Arab tribes, Prophet Muhammad and caliphs until al-Bīrūnī's age, 7-20) calendars and holidays of Muslims, Christians, Jews, Zoroastrians, Soghdians, Khwarizmians, Syrians, and pre-Islamic Arabs, 21) on Lunar stations and projections of celestial sphere onto a plane; this chapter contains information on stereographical projection, the "perfect projection" of al-Ṣāghānī (No 223) and the "cylindrical projection" of al-Bīrūnī himself.

E2. "India" - Book Containing Explanation of Doctrines of Indians, Both Acceptable by Reason or Rejectable (Kitāb fī taḥrīr mā li'l-Hind min maqāla maqbūla fī'l-`akl aw mardhūla) - Istanbul (Köprülü 1001), Paris (2280, 6080; 2222/2 - chapter 18). Edition of the Paris manuscript by Sachau 6080: al-Bīrūnī [3, 16]. English translation by Sachau: al-Bīrūnī [4]. Russian translation by Khalidov and Zavadovskiy: al-Bīrūnī [21], Uzbeki translation by Rasulev and others: al-Bīrūnī [27]. Edition and Russian translation of the chapter on Africa: Kubbel' and Matveyev [2] (115-119). Russian translation of the chapter on "chaturanga", Indian chess - Linder [1]. Research: Aslam [1], Azimjanova [4-5], Auluck [1-2], Boncompagni [2], Chatterjee [1], Dana [1], Irisov [5, 8], Jalalov [11-12], Khalidov and Ehrmann [1], Linder [1] (chess), Mainkar [1] (metrology), Mujtabai [1], F. Peters [1], Pingree [26], Rai [1], V. Rosen [5], Roy [1], Yusuf Ali [1].
Book in 80 chapters: 1-12) general information on Indians and their religion, religious books and casts, 13) Indian books on grammar and poetry, 14) Indian astronomical and other scientific books, 15) Indian measures, 16) Indian letters, reckoning, chess, and some customs, 17) Indian alchemy and some other sciences, 18) geography of India, 19-20) Indian astronomy and cosmology, 21-24) Indian notions on the form of the Earth and Heaven according to their religion, 25) Indian rivers, 26) notions on Earth and Heaven according to Indian astronomers, 27) two celestial movements according to Indian religion and astronomy, 28) ten directions, 8 horizontal and 2 vertical, 29-31) oicumene, "cupola of the Earth, and determining distances on the surface of the Earth, 32-44) Indian measurement of time, 45) movement of the stars of the Great Bear, 46-47) legends on Narayana and Vasudeva, 48) military reckoning, 49-53) Indian eras, 54) movement of planets, 55) sizes of celestial bodies and distances between them, 56-57) fixed stars, 58) ebbs and flows, 59-60) eclipses, 61-62), chronology, 63-77) Indian customs and holidays, 78-79) some periods of time, 80) Indian astrology.

M1. Third Book of "Mas`udic Canon" (al-Maqala al-thālitha min al-Qānūn al-Mas`-ūdī), 3rd book (from 11 books) of A1, the main work of al-Bīrūnī. Separate editions: edition by Ahmad: al-Bīrūnī [28]. German translation: Schoy [33] (2-63). Russian translation of chapter on interpolation: Rosenfeld [9, 14]. Research: Amir-Moèz [5], Cassina [1, 2], R. Ibadov [4] (trigonometric tables), Kazim [1], Kennedy [37], Rosenfeld [9], Rozhanskaya [1-3], Sa`idan [11], Schoy [32-34], Sirajdinov and Ahmedov [1], Utseha [2], Ziauddin [2].
Book in 10 chapters: 1) chords of 1/3, 1/4, 1/5, 1/6, 1/8, 1/10 of circle, "premise of Archimedes"; see "Chords" (No 348, M4); 2) chords of complements, chord of double arc, chord of half and ($1/2^n$) of arc, 3) determination of chord of (1/9) of circle by means of cubic equations ($x^3=1+3x$ and $x^3+1=3x$, 4) trisection of angle and determining chord of (1^o), 5) ratio between diameter and circumference, called here "ratio of the number of circumference to the number of diameter", approximately 3; 7, 30, 59, 10 and 1628681471/518400000, 6) choice of the number of diameter (2), 7) tables of sines with 4 sexagesimal digits through 15' and linear and quadratic interpolation, 8) "shadows" (tangent and cotangent) and "diameters of shadows" (secant and cosecant), tables of tangents with same digits through 1^o and the same interpolations, rules of interpolations "for all tables" (for all functions given by tables), plane sine law, 9) spherical "figure of secants" (complete quadrilateral and Menelaus' theorems), spherical sine law, 10) spherical tangent law for rectangular triangle.

M2. [Geometric and Arithmetic Parts (I and II) of "Astrology", A2]. German translations of some chapters: Wiedemann [34] (8-11) - fundamental notions of geometry, [64] (2-6) proportions, [35] (50) - trigonometrical lines. Research: Abdurahmanov [1, 4, 6], Qurbani [5] (80-205), Wiedemann [34-35, 64].
Part I - questions 1-71: 1) geometry, 2) solid, 3) 3 dimensions, 4) 6 "sides", 5) surface, 6) line, 7) point, 8) plane and straight line, 9-10) angles, 11) plane figure, 12-14) circle, diameter, chord, sagitta, 15-18) trigonometrical lines, 19-22) triangles, 23) quadrangles, 24) parallel lines, 25-28) special lines, 29-31) parallelogram and gnomon, 32) "multiplication of lines" (product = rectangle), 33) tangency of circles, 34-35) inscribed and circumscribed figures, 36) circumference with unit diameter, 38-49) part, multiple, ratio, proportion, 50-51) double and composed ratios, 52) height of figure, 53) similarity, 54) division in mean and extreme ratio, 54) equilibrium, 56) power and root, 57) cube, 58) prism, 59) cylinders, 60) cones, 61) conic sections, 62- 63) sphere, 64) 5 regular polyhedra, 65-66) great and small circles, 67) poles and axis, 68-69) equator and parallels, 70) similar arcs, 71) figure of secants.

Part II - questions 72-119: 72) unity, 73) fractions, 74-75) number and "natural number", 76-81) even, odd, even-even etc. numbers, 82-83) prime and composite numbers, 84) plane, square etc. numbers, 85) complementary numbers, 86-87) commensurable and incommensurable numbers, 88-91) perfect and amicable numbers, 92) corporal, cube etc. numbers, 93-95) triangle and other figurate numbers, 96) arithmetic, 97-98) multiplication and division, 99) square power and root, 100) rational and irrational roots, 101-102) cube power and root, 103-104) denominator, 105) rising of number in sexagesimal system, 106) contraction of commensurable numbers, 107-108) natural powers and position digits, 109) algebra and almucabala, 110) simple equations ($x=a$, $x^2=a$, $x^2=bx$), 111) complicate equations ($x^2+a=bx$, $x^2+bx=a$, $x^2=bx+a$), 112-113) thing (x) and square (x^2), 114) calculus of dirham and dinar (equations with some unknowns), 115) calculus of two errors (rule of double false position), 116-118) abjad (alphabetical numeration), 119) alphabetical notations for zodiacal signs.

M3. Book on Indian Rashikas (Maqāla fī rāshikāt al-Hind) - London (Ind. 1043/1 - incomplete), Patna (2468/37). Edition of the Patna manuscript: al-Bīrūnī [12] (No 4). Russian translation by Rosenfeld: al-Bīrūnī [24]. Research: Qurbani [5] (206-219). Indian triple rule (tray-rashika) and its generalizations for (5, 7 etc.) magnitudes, substantiation these rules by the theory of composed ratios.

M4. "Chords" (or "Cyclometry") - Book on the Determination of Chords in a Circle by Means of a Broken Line Inscribed in It (Maqāla fī istikhrāj al-awtār fī'l-dā'ira bi-khawāṣṣ al-khaṭṭ al-munḥanī fīhā) - Cairo (riyāḍa 897/5, Fāḍil riyāḍa 41/11), Istanbul (SM Murad 1396/14), Leiden (513/5), Patna (2468/42). Edition of the Patna manuscript: al-Bīrūnī [12] (No 1), edition by Damardash of Patna and Istanbul manuscripts: al-Bīrūnī [29]. German translation of the Leiden manuscript: Suter [21]. Partial English translation: Saud [3]. Russian translation by Krasnova and Karpova according to the Leiden and Patna manuscripts: al-Bīrūnī [23], Russian translation by Bulgakov according to the Istanbul, Leiden and Patna manuscripts: al-Bīrūnī [50] (25-77). Research: Bulgakov and Rosenfeld - al-Bīrūnī [50] (259-278), Daghir and Saffuri [1], Damardash [1, 2], Daud [3], Karpova and Krasnova [1], Samsó [4], Saud [3], Suter [34].

Treatise contains 14 proofs of the Archimedes theorem that if D is the middle of an arc ABC, then $AB \cdot BC=AD^2$ and corollaries of it by Serenus, al-Jurjānī (No 83), Ibn ʿIsma (No 181), al-Ḥubūbī (No 278), al-Sijzī (No 296), Ibn ʿIrāq (No 299), Ibn al-Haytham (No 328), al-Shannī (No 344), Jashnis (No 345), al-Qainī (No 346), and al-Bīrūnī himself; proofs by al-Shannī of the theorems of Hero and Aryabhata, some theorems of trigonometry and applications to problems of spherical astronomy.

M5. Cartography - Treatise on Projection of Constellations onto a Plane and the Map of Spheres onto a Plane (Risāla fī tasṭīḥ al-ṣuwar wa tabṭīh al-kuwar) - Cairo (riyāḍa 898/16, Leiden (14/15 - anonymous), Tehran (ʿUlumi 64/3, Univ. 5469/3). HS1 mentions manuscript with the same title in 10 folios, see Sachau [2] (43). Editions: Dana Sirusht [2] (1-20), Saʿidan [22] (9-22). German translation of the Leiden manuscript: Suter [35]. Russian translation of the Leiden manuscript: Ahmedov and Rosenfeld [2] (129-144). Uzbeki translation of the same manuscript by Rasulev: al-Bīrūnī [40]. Abridged Persian translation: Dana Sirusht [2] (21-32). Research: Ahmedov and Rosenfeld [2] (127-128, 144-158), Berggren [8], Berggren and Richter-Bernburg [1], Fiorini [1], Jalalov [3, 5], Kennedy and Debarnot [2], Saʿidan [22].

Treatise in 6 chapters: 1) importance of the projection sphere onto a plane for astronomy and geography, 2) projections of al-Farghānī (No 67) and al-Marwarrudhī (No 42), 3) "cylindric" (orthogonal) projection proposed by al-Bīrūnī, 4) the map of al-Ṣūfī (No 212) by means of application of paper, 5) globular projection proposed by al-Bīrūnī where the meridian, the boundary of hemisphere, is imaged by a circle, the orthogonal meridian and equator are imaged by two orthogonal diameters and degree scales on these circles are imaged by homogeneous scales on the circle and its diameters, 6) other projections. Part of this treatise is included in "Chronology" (No 348, E1) al-Bīrūnī [15] (407-413).

M6. Map of Stars and Countries (Fī taṣwīr al-kawākib wa'l-buldān) - Tehran (ʿUlumi 64/2).

M7. "Spherics" - Book of Keys of the Science of Astronomy [on] what Happens on the Surface of the Sphere (Kitāb maqālīd ʿilm al-hayʾa mā yaḥduthu fī basīṭ al-kura) - Tehran (Sipahsalar 597). Photo-reproduction of the manuscript: Qurbani [5] (461-504). Edition and French translation: Debarnot [2] (96-305). Research: Debarnot [3], Kennedy [26], Khayretdinova [7], Qasimova [1-3], Qurbani [5] (400-460), Qureshi [1], Sayılı [25]. Treatise on spherical trigonometry written between 994 and 1000 and dedicated to Ispahbad Marzuban ibn Rustam, prince of Gilan and Tabaristan. Reference for Menelaus' "Spherics", Ptolemy's "Almagest", works of al-Nayrizi (No 135), al-ʿIsma (No 181), al-Khāzin (No 194), al-Ṣūfī (No 212), Abū'l-Wafa (No 256), al-Khujandī (No 269), Ibn ʿIrāq (No 299), Ibn Labbān (No 308), and Ibn al-Baghdādī (No 321). Proofs of spherical sine law by Ibn ʿIrāq in (No 299, A5), as well as by Abū'l-Wafā', al-Khujandī, and al-Bīrūnī himself.

M8. Exposition of the Book of Abū Ḥāmid al-Ṣaghānī on the Perfect Projection (Jawāmi` ma`ānī kitāb Abī Ḥāmid al-Ṣāghānī fi'l-tasṭīḥ al-tāmm) - Leiden 123/2, is mentioned in A5. The treatise was written after al-Bīrūnī learned about treatise (No 223, M1) of al-Ṣaghānī.

M9. Letter to Abū Sa`id (Kitāb ilā Abī Sa`īd) - Leiden (168/16). German translation: Suter [31]. English translation: Kennedy and Id [1]. Letter to al-Sijzī (No 296) on analemma of Ḥabash al-Ḥāsib (No 46) for determining the azimuth of Qibla. Research: Abdulla-zade [12], Berggren [3, 6].

In HS1 (Sachau [1], 42-44) al-Bīrūnī mentioned his following mathematical works:

M10. Memorandum on Arithmetic and Reckoning by Means of Hindu Figures (Tadhkira fi'l-ḥisāb wa'l-`add bi-arqām al-Sind wa'l-Hind), manuscript in 30 folios. "Al-Sind wa'l-Hind" is the Arabic name of India (from Persian and Indian names of the river Indus), "Hindu figures" - "Indian figures" 1, 2, . . . , 9, 0 borrowed by Arabs from Indians (and later by Europeans from Arabs).

M11. Extraction of Cube Roots and Bases of further Arithmetic Digits (Fī istikhrāj al-ka`āb wa aḍlā` mā warā'ahu min marātib al-ḥisāb), manuscript in 100 folios. Treatise on extraction of roots of power ≥ 3.

M12. Numerical Sankalitas (Fī sankalita al-a`dād), manuscript in 30 folios. Since triangular numbers $S_n^{(1)} = \Sigma_1^n k = n(n+1)/2$ are called by the word "sankalita" by the Indians and words "sankalita samkalita" mean "pyramidal numbers" $S_n^{(2)} = \Sigma_1^n S_n^{(1)} = n(n+1)(n+2)/2 \cdot 3$, this treatise like the "Book on Indian Rashikas" contains the exposition of these Indian rules, their proof and generalizations for $S_n^{(m)} = \Sigma_1^n S_n^{(m-1)}$.

M13. Modes of Indian Records in Learning Arithmetic (Kayfiyyat rusūm al-Hind fī ta`allum al-ḥisāb), the number of folios was not indicated.

M14. Superiority of Opinion of Arabs over the Opinion of Indians on Digits of Numbers (Fī anna ra`y al-`Arab fī marātib al-`adad aṣwab min ra'y al-Hind fīhā), manuscript in 15 folios.

M15. Establishment of [Modes of] Multiplication (Manṣūbāt al-ḍarb), the number of folios was not indicated.

M16. Memorandum on Measurement for Musāfir al-Muqawwī (Tadhkira fi'l-misāḥa li'l-Musāfir al-Muqawwī), manuscript in 19 folios, written for al-Muqawwī (No 347).

M17. Book on on Carrying the Properties [Obtained by] the Figure of Secants that are not Applicable (Maqāla fī naql khawāṣṣ al-shakl al-qaṭṭā ` ilā mā yughnī `anhu), manuscript in 20 folios. Treatise on spherical trigonometry, "properties obtained by the figure of secants" are properties proved by the spherical Menelaus theorem, "properties which do not need in it" are properties proved by other theorems of spherical trigonometry.

M18. Book Showing that the Conditions of the Infinite Division of Quantities are similar to the Problem where two lines Approach each other but do not meet despite their Continuous Progress (Maqāla fī anna lawāzim tajzi'at al-maqādir lā ilā nihāya qarība min amr al-khaṭṭayn alladhayn yaqrubān wa lā yultaqiyān fi'l-istib`ād), manuscript in 30 folios. Probably, the fragment from the supplement of the Patna manuscript of "Chords" (al-Bīrūnī [12], No 1, 180-184), where the treatise of al-Kindī (No 79) is quoted. Research: Bulgakov and Ahmedov [1].

M19. Collection of Various Methods of Determining Chords of a Circle (Jam` al-ṭuruq al-sā'ira fī ma`rifat awtār al-dā'ira), the number of folios was not indicated.

M20. Complement to the Art of Projection onto a Plane (Takmīl ṣinā`at al-tasṭīḥ), the number of folios was not indicated. In "Chronology" (No 348, E1) al-Bīrūnī mentions his mathematical work.

M21. Book of Figures (Kitāb al-arqām) - see al-Bīrūnī [2] (134). This book is mentioned in "Chronology" in connection with the "chess problem", the problem on the sum of the progression $1+2+4+. . . +2^{63}$. Since the numbers obtained in this problem are written in "Chronology" in sexagesimal system, apparently in the quoted book, the position of sexagesimal system for integers was considered. Research: Qurbani [5] (234-240).

M22. [Sanskrit Translation of Euclid's "Elements"] Sk - is mentioned in "India" (No 348, E2) by al-Bīrūnī [4] (I 127).

A1. Mas`udic Canon on Astronomy and Astrology (al-Qānūn al-Mas`ūdī fi'l-hay`a wa'l-nujūm) - Berlin (5667, quart. 1613), Bombay (65), Cairo (mīqāt 866, 874 - a fragment, Ṭal`at mīqāt 866), Hyderabad (riyāḍa 374), Istanbul (AM 462, BU 2277, Kandilli, SM Carullah 1498), Konya (Yusuf 1797), London (1997), Mashhad (5588), Oxford (516), Paris (5840), Rampur (I 64).

Edition by Nizamuddin according to the Berlin, Cairo, London, Oxford, Paris and 3 Istanbul manuscripts prepared by Krause: al-Bīrūnī [14]. Russian translation by Bulgakov, Rosenfeld, Rozhanskaya, Smirnov, and A. Ahmedov: al-Bīrūnī [36, 43], Uzbeki translation by Rasulev and Ahmedov: al-Bīrūnī [37, 48]. English translation of a part of the foreword: Sachau [1] (12-14). English translation of the chapter I of Book IV (on

obliquity of ecliptic): Farook [1], Partial German translation of chapters 2, 11, 14, and 17 of Book IV book (on problems of spherical astronomy): Schoy [33] (64-73). German translation of chapter 8 of Book IV (on determining latitudes): Schoy [26]. Partial edition and English translation of chapter 2 of Book I (principles of the system of Ptolemy): Barani [2]. English and German translations of chapter 2 of Book VI (on mathematical geography): Kramers [3], Schoy [20]. Partial English translation of chapter 8 of Book VI (movement of the Sun): Hartner and Schramm [1] (211-213). Partial Russian and German translations of chapter 9 of Book VIII (on colour of the Moon at eclipse): Sadyqov [4] (110-114), Wiedemann [149]. Partial Russian and German translations of chapters 11 and 14 of Book VIII (on daybreak and twilight): Sadykov [4] (119-121), Wiedemann [137a]. Russian translation of Krasnova and Rozhanskaya of chapter 5 of Book IX (catalogue of fixed stars): al-Bīrūnī [18] (92-150). Photo-reproductions of the title page and of one page: SSM (237).

Research: Abalakin and others [1], Ahmedov [8-9], Barani [4], Berggren [3], Bulgakov [10] Bulgakov and Rosenfeld [1], Hamadanizadeh [2], Hartner and Schramm [2], Hermelink [3], Jalalov [2, 9], Jalalova [1-2], Kennedy [9, 17, 31, 33], Kennedy, Engle and Wamstad [1], Kunitzsch [7] (52-53), Lesley [1], Pines [11], Rosenfeld and Rozhanskaya [1], Schirmer [1], Schoy [21, 27], Sheynin [1-2], Sirajdinov and Ahmedov [1], Tekeli [3-5], Vernet [22], Vahabov [4], Wiedemann [149].

Work in 11 books: I) Universe, II) time, III) circle and sphere, IV) celestial sphere, V) the Earth, VI) the Sun, VII) the Moon, VIII) mutual disposition of the Earth, Sun, and Moon, IX) planets, X) fixed stars, XI) mutual disposition of stars and planets.

Book I in 11 chapters: 1) universe, 2) priciples of the system of Ptolemy, 3) celestial circles, 4-11) days, months, and years of various nations.

Book II in 12 chapters: 1-3) on three calendars - Lunar Muslim, Solar Christian, Solar Persian, 4-6) eras of other nations, in (5) chronological table of Biblical Patriarches, Babylonian and Assyrian kings, Egyptian Ptolemaic kings, Roman and Byzantine emperors, Prophet Muhammad and caliphs until al-Bīrūnī's age, 7-12) calendars and holidays of Muslims, Christians, Jews, Zoroastrians, and Syrians.

Book III = M1.

Book IV in 26 chapters: 1) obliquity of ecliptic, 2-6) transit from elliptical coordinates on celestial sphere (longitude λ and latitude β) to movable equatorial coordinates (right ascention α_0 and declination δ) and viceversa, 7-12) determination latitude φ of cities, 13-17) transit from fixed equatorial coordinates on celestial sphere (α_0 and hour angle t) to horizontal coordinates (altitude h and azimuth A) and viceversa, 18) transit from λ to ascention α_φ at city with latitude φ, 19) degrees of rise and set of celestial bodies, 20-22) determination past part of day and night, 23-24) determination of cardinal points (intersections of eclipticwith horizon and meridian), 25-26) on ascensions on various horizons.

Book V = G1.

Book VI in 11 chapters: 1) transformation of time under transit from one city to the other, 2) longitudes of Alexandria and Ghazna, 3) determination times of equinoxes, 4-5) excentric hypothesis of the movement of the Sun, 6) mean movement of the Sun, 7-8) visible inhomoneous movement of the Sun, in particular, movement near points of minimum and maximum of velocity, movement of the apogee of the Sun, 9-10) tables of the movement of the Sun, 11) equation of time.

Book VII in 11 chapters: 1-3) longitudinal movement of the Moon with tables, 4-6) latitudinal movement of the Moon with tables, 7-9) Lunar inequalities, 10-11) determining sizes of the Sun and the Moon and their distances from the Earth.

Book VIII in 17 chapters: 1-2) velocities of the Sun and the Moon and their conjunctions and oppositions, 3-11) Solar and Lunar eclipses, 12-14) phases of the Moon; dawn and glow, 15-17) Lunar stations, Indian theory of eclipses.

Book IX in 9 chapters: 1-9) fixes stars, in 5 catalogues of 1029 stars with their ecliptical coordinates.

Book X in 13 chapters: 1-8) Ptolemaic theory of longitudinal movement of 5 planets with tables, 9-10) theory of latitudinal movement of 5 planets with tables, 11-13) appearance and disappearance of planets, their conjunctions, mutual eclipses and eclipses by the Moon.

Book XI in 12 chapters: 1-3) cardinal points and astrological houses, 4-10) astrological operations, 11-12) conjunctions of planets, astrological periods.

In chapter 5 of Book VI, chapter 9 of Book VII, and chapter 7 of Book X devoted to depicting the form of the movement of the Sun, Moon, and planets respectively, these movements are described as movements in massive celestial spheres according to Ptolemy's "Planetary Hypotheses" and (No 67, A1) of al-Farghani.

A2. "Astrology" - Book of Instruction of the Elements of the Art of Astrology (Kitāb al-tafhīm li-awā'il ṣinā'at al-tanjīm) - Aligarh (Azad Subh. 520/11, Univ. 17), Berlin (5655, 5667), Cairo (mīqāt 450, 848, 901), Dublin (Beatty 3910), Istanbul (Millet, Feyzullah 1333; TK 3477-3478), Jerusalem (282), London (8349), Oxford (I 221, II 262), Paris (2497), Princeton (Yehuda 4690), Rabat (439), St. Petersburg (Nat. ANS 600/15), Tehran (Sipahsalar 772). Edition of the London manuscript by Wright with English translation according to manuscripts of A2 and A3 kept in European libraries: al-Bīrūnī [7]. Russian translation by Rosenfeld,

Abdurahmanov, Ahmedov, Rozhanskaya, and Sergeyeva: al-Bīrūnī [42]. German translations of chapter on directions on celestial sphere by Wiedemann: Wiedemann [138], chapter on dawn and glow: Wiedemann [137a], on astrolabe: Wiedemann [35] (33-40), on signs of planets on astrolabes: Wiedemann [119]. Russian translation of some chapters: Jalalov [2]. Russian translation of the chapter on Indian circle: Sadyqov [4] (126-128). Russian translation of some chapters of astrolabe: Rosenfeld, Rozhanskaya, and Sokolovskaya [1] (157-162). Russian translation of some chapters by Rosenfeld, Abdurahmanov, and Rozhanskaya: al-Bīrūnī [41]. Research: Gharavi [1], Munirov [1-2] (manuscripts), Qurbani [5] (80-205), Rosenfeld [16], Rosenfeld and Ahmedov [1], Sachau and Holetschek [1], Wiedemann [35, 119, 137-137a].

The book is dedicated to Rayhana, daughter of al-Ḥasan, and contains 530 questions and answers. 8 parts: I) geometry, II) arithmetic, III) astronomy, IV) geography, V) natural astrology; VI) chronology, VII) astrolabe, VIII) judiciary astrology .

Parts I and II = M2.

Part III - questions 120-206: 120-123) heaven and celestial spheres, "what is outside the eighth sphere", 124) sub-lunar world, 125) stars and planets, 126-127) celestial movements, 128-131) horizon, meridian, East, West, North, South, 132-134) day and night, dawn and twilight, 135-137) hours and minutes, 138-143) equinoxes, ecliptic and other circles on celestial sphere, 144-145) parts of circumference and diameter, 146) zodiacal signs, 147-149) declination and latitude of celestial bodies, 150-152) planets, 153-154) conjunctions, 155-156) phases of the Moon, 157-169) fixed stars, 170-175) excentric theory of movements of the Sun, 176-204) epicyclic theory of movement of the Moon and planets, 205-206) sizes of the Sun and the Moon and the planets and their distance from the Earth.

Part IV = G2.

Part V - questions 242-267: 242-244) ascensions and transits of celestial bodies, 245-249) horoscope, cardinal points, and "astrological houses", 250-254) conjunctions and oppositions, 255-267) Solar and Lunar eclipses, parallaxis.

Part VI - questions 268-323: 268-278) days and months, 279-282) eras, 283-320) Jewish, Christian, Muslim, Zoroastrian, Syrian, Soghdian, and Khwarizmian calendars, 321-323) ephemerides.

Part VII - questions 324-346: 324-329) astrolabe, its parts and kinds, stereographical projection, 330-340) use of the astrolabe, 341-342) determining zodiacal signs and cardinal points, 343-346) measuring inaccessible objects.

Part VIII - questions 347-530: 347-447) astrological meaning of zodiacal signs, stars, and planets, 448-514) astrological operations, 515-519) classification of astrological predictons, 520-530) technique of astrological predictions.

A3. Book of Instruction of Elements of the Art of Astrology (Kitāb al-tafhīm li-awā'il ṣinā`at al-tanjīm) P - Aligarh (Univ. 44-45), Dushanbe (315), Istanbul (NO 2780), Jaipur (7), London (Sup. 7697), Madras (Firuz 2/2, Sup. 93, 95), Manchester (Lind. 700), Mashhad (5472-5473), Paris (49, 774), Tashkent (445/1, 3423), Tehran (162, 2131-2132; Malik 3254; Sipahsalar 164; Univ. 3722, 3752-3753). Persian version of A2. Edition of the Tehran manuscript by Humai: al-Bīrūnī [10]. Tajiki edition of the text published by Humai: al-Bīrūnī [38]. Research: Asimov [1-2].

A4. "Shadows" (or Gnomonics) - Book of Selection of Sayings on Shadows (Kitāb fī ifrād al-maqāl fī amr al-aẓlāl) - Patna (2468/36). Edition of the main text: al-Bīrūnī [12] (No 2), introduction and first three chapters: Ibn-Sinan [1] (No 3, 34-63). English translation by Kennedy: al-Bīrūnī [30], [34] (I). Russian translation by Bulgakov and Rosenfeld: al-Bīrūnī [50] (119-255). Surveys: Abdurahmanov [2], Kennedy [33]. Research: Abdurahmanov [2] (on chapters 9-10), Bulgakov and Rosenfeld: al-Bīrūnī [50] (286-325) (commentary on the whole book), Davidian [1] (on chapter 23), Kennedy: al-Bīrūnī [47] (II) (commentary on the whole book), Lesley [1] (chapter 22), Ma`rufov [8] (15-16) (description of interference and diffraction in chapters 4-5), Rosenfeld [28] (description of inhomogeneous movement in chapter 1 and on space coordinates in chapter 3), Rosenfeld and Utseha [1-2], Sa`idan [1], Hermelink [3] (on chapter 21).

Book is dedicated to Musafir al-Muqawwi (No 347) and contains an introduction on the aims of the book and its non-contradictoriness to Islam and 30 chapters: 1) First celestial movement. 2) Light and darkness. 3) Shadow depending on the position of the source of light, orthogonal coordinates in the space, shadows in the Gospel, in the Qur'an, and in the classical Arabic poetry, critique of the expression "Sultan is a shadow of God on the Earth", the epithet of Maḥmūd Ghaznawī. 4) Principles of gnomonics, conic sections described by the end of the shadow of gnomon on plane, effect of camera-obscura and polemics with Ibn Qurra's treatise (No 103, Ph1), attempt to explain the phenomenon of diffraction by geometric optics. 5) Analogous attempt to explain the phenomenon of interference, reference to the work (No 104, E1) of al-Iranshahri, discussion on Plato's doctrine on shadow, discussion of parallaxis. 6) sundials. 7-8) subdivision of gnomon to 60 "parts", 12 "fingers", and 7 or $6\frac{1}{2}$ "feet" and transformations of shadows. 9-12) cotangent (plane shadow), cosecant (diameter of plane shadow), tangent (versed shadow), secant (diameter of versed shadow), and on their tables.

13-14) tangent-quadrants on astrolabes. 15) oblique and spherical sundials. 16-17) determining the noon shadow. 18-21) determining the meridian. 22-26) determining time and, in particular, prayer times. 27) tangent law in spherical trigonometry. 28-30) determining terrestrial and celestial distances. The book was written in Ghazna before 1027, when al-Bīrūnī composed the collection of treatises copied in the Patna manuscript containing this treatise.

A5. "Astrolabes" - Exhaustion of all Possible Modes of Construction of the Astrolabe (Istī'āb al-wujūh al-mumkina fī ṣan'at al-asṭurlāb) - Baghdad (Islam. 20, Sarkis 157), Berlin (5795-5796), Cairo (falak 8528), Dublin (Beatty 3773), Hyderabad (hay'a 2, 161), Istanbul (SM AS 2576, Carullah 1451; TK 3505/7), Leiden (591/4), London (5593), Oxford (I 1037/3), Rampur (I 425), Tehran (81/2, 150, 1926; Malik 3319; Sipahsalar 705-706; Zanjani 5539-5540), Tunis (5539-5540).

Description of the Berlin manuscripts: Ahlwardt [1] (230-231). German translations: Wiedemann [163] (24-26 - the foreword), [35] (51-53 - on trigonometric lines), [165] (on construction of conic sections), [116] (on perfect compass), [142] (on mechanical calendar), Wiedemann and Frank [4] (on rims and spiders of astrolabes), [3] (partial translation of chapters of various kinds of astrolabes and on "perfect projection" of al-Ṣaghānī), Seemann and Mittelberger [1] (on spherical astrolabes).

Research: Abdurahmanov [1, 3-4], Elwell-Sutton [1], Rosenfeld and Abdurahmanov [1], Rosenfeld, Rozhanskaya, and Sokolovskaya [1] (152-155, 162-166, 168-172), Tagi-zade [4], Tagi-zade and Vahabov [1], Vahabov [5-7], Wiedemann [35, 116, 142, 163, 165], Wiedemann and Frank [1, 3].

Treatise in 78 chapters on the construction of various kinds of astrolabes: 1-3) "dasturs" (nomograms) for circular scales and diameters of circles; 4-5) image of celestial equator and day circles (its parallels), and of the horizon and almucantars (its parallels) on the tympanum of the astrolabe under stereographical projection from the Southern pole of the celestial sphere when the image of the Northern part of the celestial sphere is in the central area of projection plane; 6) drawing hour lines on tympanums; 7-8) map of fixed stars on the spider of the astrolabe; 9-10) determining the distances of stars from the celestial equator; 11) determining the transit of the meridian by stars; 12-14) drawing verticals on the tympanum; 15) map of fixed stars by means of verticals; 16) map of almucantars (below the horizon); 17) correction of old astrolabes; 18) construction of the Southern astrolabe (based on the projection of the celestial sphere from its Northern pole when under this projection the image of the Southern part of the celestial sphere is in the central area of the projection plane); 19-20) drawing hour lines for equal hours; 21) construction of the "tympanum of direction" (for solution of astrological problem of "projecting rays"); 22) construction of the "tympanum for [all] horizons" (that is, for all latitudes); 23) determining ascensions of zodiacal signs; 24) construction of almucantars of horizon coinciding with celestial equator (that is, of the horizon for terrestrial pole); 25-26) determining sines of arcs and arcs for sines by sine-quadrant on the back of the astrolabe; 27-29) drawing of arcs for the beginning of dawn, end of twilight, and beginning and end of evening prayers; 30-33) drawing hour lines of equal and season hours on the back of the astrolabe; 34) construction of tangent-quadrants on the back of the astrolabe; 35) construction of alidad for measuring altitudes of stars or planets; 36-39) construction of astrolabes of al-Sijzī combined from Northern and Southern astrolabes described by him in (No 296, A13); 40-43) construction of the boat-shaped astrolabe invented by al-Sijzī, as well as ruler, cross, and spiral astrolabes; 44-46) drawing of almucantars for various latitudes by means of tables and dasturs; 47-48) drawing of circles for equalization of astrological houses; 49) construction of spherical astrolabes with and without the spider; 50) construction of the "observer astrolabe", a combination of the usual astrolabe and armillary sphere; 51-52) construction of the "flat astrolabe" based on approximate stereographical projection; 53) construction of "complete astrolabe" of al-Bīrūnī based on his "cylindrical projection"; 54) construction of an ellipse by the "method of gardener" proposed by Banū Mūsā in (No 74, M5); 55-56) construction of "perfect astrolabes" invented by al-Ṣaghānī in (No 223, M1); 57) determining the axis of ellipse; 58-61) drawing horizon and almucantars of the Northern perfect astrolabe in the form of ellipse, parabola, and hyperbola by means of projective transformation of a circle; 62) construction of hyperbola by the method of Ibn 'Irāq (No 299); 63-66) construction of conic sections by the perfect compass proposed by al-Kūhī in (No 277, M8); 67-68) drawing horizon and almucantars of the Southern perfect astrolabe; 69-73) drawing verticals on the perfect astrolabe; 74-75) map of fixed stars on the spider of the perfect astrolabe; 76) construction of "Moon box", the mechanical calendar, which demonsrates movements of the Sun and the Moon; 77) construction of "disk of eclipses', the instrument for demonstration of the Solar and Lunar eclipses made by Bastulus al-Asṭurlābī (No 152), al-Adami (No 85) and 'Utarid (No 233); 78) construction of the instrument for observing the crescent.

A6. Description of the Astrolabe (Fī ṣifat al-asṭurlāb) - Tehran ('ulumi 64/1).

A7. Book on Construction of the Astrolabe (Maqāla fī ṣan'at al-asṭurlāb) - Tehran (Univ. 5469/1).

A8. Treatise on the Astrolabe (Risāla fī'l-asṭurlāb) - Istanbul (SM Aşir Reisülküttap 577). Description of the manuscript: SHIM (480).

A9. Book on Transformation of the Potency of the Astrolabe to Actuality (Kitāb fī ikhrāj mā fī quwwat al-asṭurlāb ilā'l-fi`l) = Training of Thought and Mind on Transformation of the Potency of the Astrolabe to Actuality (Riyāḍat al-fikr wa'l-`aql fī ikhrāj mā fī quwwat al-asṭurlāb ilā'l-fi`l) - Berlin (5794 - untitled), Cairo, (falak 3774/2, 3929, mīqāt 262 - under the second title), Diyarbakır (A 2213 - under the second title), Hyderabad (riyāḍa 42 - under the first title), Rampur (3689 - under the first title), Tehran (Univ. 1971/2, 5469/3 - under the first title).

Identity of contents of the untitled Berlin manuscript with other manuscripts was established by King (SSM, 48). Description of the Berlin manuscript: Ahlwardt [1] (228-229). German translation and research of the chapters on the description of the astrolabe and on determining distances to inaccessible objects: Wiedemann [35] (35-37, 60-61), of the chapter on determining the circumference of the Earth: Wiedemann [101, 133]. Research: Atagharryyev [5-6], Vahabov [6].

Treatise in 68 chapters: 1-33) determining the celestial coordinates and other astronomical and astrological characteristics of planets and stars, 34) determining the azimuth of Qibla by means of astrolabe: for given city the stereographical projections onto tympanum of astrolabe of the zenith Z of this city, the zenith M of Mecca, and the zenith N of the North pole and the azimuth of Qibla is equal to one of angles under projection of the spherical triangle NZM onto tympanum, 35-45) determining other astronomical and astrological characteristics of planets and stars, 46-49) determining tangents and cotangents of altitude and vice versa, 50-51) determining prayer times, 52-59) determining the sine and versed sine of an arc and vice versa, 60) determining the horoscope by "tympanum for [all] horizons", 61-68) determining distances between inaccessible objects.

A10. Treatise on the Validity of the Astrolabe (Risāla-yi ḥaqīqat-i asṭurlāb) P - Hyderabad (riyāḍa 328; Salar hay'a 34/3).

A11. Book on Methods of Applications of Sciences to the Astrolabe (Maqāla fī'l-ṭarīq bi isti`māl funūn al-asṭurlāb) - Cairo (mīqāt 914), Paris (2498/1). Research: Pines [11], Vahabov [6]. Treatise in 20 chapters plus introduction. In the introduction many kinds of astrolabes are described such as those combined from the Northern and Southern astrolabes as well as boat-shaped ones. Problems solved in chapters are the same as in A9, but unlike A9 these problems are solved not only for the regular astrolabe, but for many kinds of astrolabes, in particular, the boat-shaped astrolabe.

A12. Book on Operations with the Astrolabe (Kitāb al-`amal bi'l-asṭurlāb) - Mashhad (5594).

A13. Book of Pearls on the Plane [Projection] of the Spheres (Kitāb al-durar fī saṭḥ al-ukar) = On Simplification of Projection of the Astrolabe [Measurement] and Operations with [Projections] Composed of Northern and Southern (Fī tashīl al-tasṭīḥ al-asṭurlābī wa'l-`amal bi-murakkabātihī min al-shimālī wa'l-janūbī) - Oxford (I 913/24, 987/30, 1046 - only first "question"). The first title is written at the beginning of the treatise, the second title is written at the end; the treatise is mentioned in HS1 under the second title as manuscript in 10 folios. Edition and English translation: Dallal [2] (86-127). Description of the manuscripts: GAS (VI 269-270). Research: Dallal [2], (81-95, 128-137), Tagi-zade and Vahabov [1] (181-183), Vahabov [2-3, 5].

Treatise on astrolabes in 2 "questions". The first "question" contains 8 "reasonings": 1) "projection of the astrolabe", i.e. stereographical projections of the celestial sphere from one of its poles onto a plane parallel to its equatorial plane, and more general projection of al-Ṣaghānī (No 223) with center at a point of the axis of the celestial sphere different of its poles; 2) construction of projections of day circles, i.e. celestial equator and its parallels; 3) construction of projections of horizon circle; 4) construction of projections of almucantars, i.e. parallels of horizon; 5) construction of projections of azimuth circles, i.e. verticals; 6) construction of projections of ecliptic circle and zodiacal signs; 7) construction of projections of the most bright fixed stars; 8) drawing hour lines. All constructions are considered on the example of "projections of astrolabe". The second "question" contains 6 "reasonings": 1) determining horoscope, i.e. projection of the point of intersection of ecliptic with the eastern part of the horizon on the Northern and Southern astrolabes; 2) approximate determining horoscope on the astrolabes of al-Ṣaghānī;, 3) determining horoscope on myrtle-shaped and drum-shaped astrolabes combined from Northern and Southern astrolabes described by al-Sijzī in (No 296, A13); 4) determining horoscope on the boat-shaped astrolabe invented by al-Sijzī (No 296); 5) determining the horoscope on cross and ruler astrolabes; 6) determining horoscope on the spiral astrolabe. The names of al-Ṣaghānī and al-Sijzī are not mentioned. The treatise was written at Gurganj, Khwarizm, for al-Masihi (No 285).

A14. Decisive Criterion in the use of Plane Astrolabe (al-Miqyās al-murajjaḥ fī'l-`amal bi'l-asṭurlāb al-musaṭṭaḥ) - Cairo (mīqāt 262, 3929).

A15. Information on the Instrument Called the Sextant al-Fakhrī (Ḥikāyat al-āla al-musammāt al-sudus al-Fakhrī) - Beirut (Greek. 364/2). Edition by Cheikho: al-Bīrūnī [6]. French translation according to exposition by al-Marrakushi (No 592, A1): Sédillot [7] (202-206). Russian translations: by Abdurahmanov and Rosenfeld: Rosenfeld, Rozhanskaya and Sokolovskaya [1] (137-139), by Bulgakov: Bulgakov [8], [11] (51-

52). Description of the great astronomical instrument built by al-Khujandī (No 269) who worked in Rayy at the court of Buyid Sultan Fakhr al-Dawla (977-997).

A16. "Transits" - Preparation of Substantiation for the Investigation of the Meaning of Transit (Tamhīd al-mustaqarr li-taḥqīq ma`nā al-mamarr) - Patna (2468/38). Edition: al-Bīrūnī [12] (No 3). English translation by Saffuri and Ikram with commentary by Kennedy: al-Bīrūnī [17]. Research: Davidian [1], Toomer [1]. Exposition of the theory of mutual disposition of planets containing information on the now non-extant Indian and Persian astronomical treatises.

A17. Book on Analysis and Determination of Partial Values of Equation [of the Sun] (Maqāla fī'l-taḥlīl wa'l-taqṭī` li'l-ta`dīl) - Patna (2468/42), is included in the manuscript of "Chords" (No 348, M4) by al-Bīrūnī; is also mentioned in HS1 as a manuscript in 30 folios. Editions: al-Bīrūnī [12] (No 1, 109-223) and al-Bīrūnī [29]. Russian translation by Bulgakov: al-Bīrūnī [50] (79-118). Research by Bulgakov: al-Bīrūnī [50] (279-285), Kennedy and Muruwwa [1]. "Equation of the Sun" is the angle ESC where E is the Earth, S is the Sun, and C is the center of excentric olar orbit introduced for explanation of inhomogeneous visible movement of the Sun.

A18. Treatise on the Knowledge of the Sun by Means of the Globe (Risāla dar ma`rifat-i āftāb az kura) P - Mashhad (5542).

A19. Selected from Zījes (Ghurra al-zījāt) - Ahmadabad (Pir Muhammad-Shah). Edition and English translations by S. Rizvi: al-Bīrūnī [26], S. Rizvi [2] (40-90). Research: S. Rizvi [2]. Revision of the Indian Zīj "Karanatilaka" of Vijaya-Nanda.

A20. Book on the Motion of two [Astrological] Lots, that of Fortune and Absence (Maqāla fī sayr sahmay al-sa`āda wa'l-ghayb) - Oxford (Seld. A11). Facsimile edition of the manuscript with English translation and introduction: Haddad, Pingree, and Kennedy [1].

In HS1 (see Sachau [1], 42-44) al-Bīrūnī mentions his following astronomical works:

A21. Method for Investigation of the Movement of the Sun (Ṭarīq ilā taḥqīq ḥarakat al-shams) - in HS1 manuscript of this treatise is mentioned as lost, a fragment is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 69-70). Russian translation by Krasnova: al-Bīrūnī [23] (122-123).

A22. Useful Questions and Exact Answers (al-Masā'il al-mufīda wa'l-jawābāt al-sadīda fī `ilal zīj al-Khwārizmī), manuscript in 250 folios. Commentary on the Zīj of al-Khwārizmī (No 41, A1), a fragment is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 75-78). Russian translation by Krasnova and Karpova: al-Bīrūnī [23] (125-126).

A23. Refutation of Falsehood on Proofs of Actions of al-Khwārizmī in his Zīj (Ibṭāl al-buhtān bi-īrād al-burhān `alā a`māl al-Khwārizmī fī zījihī), manuscript in 36 folios. A fragment is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 78-79). Russian translation by Krasnova and Karpova: al-Bīrūnī [23] (126-127).

A24. Indication of Celestial Influence on Terrestrial Events (Dalālat al-āthār al-`ulwiyya `alā al-aḥdāth al-sufliyya), manuscript in 30 folios. A fragment is quoted in "Chords" (No 348, M4) by al-Bīrūnī [12] (No 1, 79-80). Russian translation by Krasnova and Karpova: al-Bīrūnī [23] (127).

A25. About Verified [Zīj] and Ibn Kaysūm al-Muftatan's Commentary [on it] (Fī amr [al-Zīj] al-mumtaḥan wa tabṣīr Ibn Kaysūm al-Muftatan), manuscript in 100 folios. Commentary on Zīj (No 31, A1) of Abī Manṣūr.

A26. Correction of "Sections" of al-Farghani (Tahdhīb fuṣūl al-Farghānī), manuscript in 200 folios. Commentary on (No 67, A1) of al-Farghani written for Musāfir al-Muqawwī (No 347).

A27. Book on Ascensions [on] the Cupola of the Earth and Positions of Fixed Stars that have Latitudes (Maqāla fī ṭāli` qubbat al-arḍ wa ḥālāt al-thawābit dhawāt al-`urūd), manuscript in 30 folios.

A28. Small Book on the Value of Night and Day all over the Earth to Prove that on the Pole one Year is [One] Day (Maqāla ṣaghīra fī i`tibār miqdār al-layl wa'l-nahār fī jamī` al-arḍ li-ta`rīf kawn al-sana yawman taḥt al-quṭb) - the number of folios is not indicated.

A29. Book on Investigation of Lunar Stations (Kitāb fī taḥqīq manāzil al-qamar) - the number of folios is not indicated.

A30. Book of Mediation between Two [Scholars] (Kitāb al-wasāṭa baynahumā) - the number of folios is not indicated.

Book on mediation between commentary (No 193, A1) by al-Ahwazī on Zīj of al-Khwarizmī (No 41, A1) and this Zīj.

A31. Collection of Ideas of Indians on Astronomical Calculations (Jawāmi` al-mawjūd li-khawāṭir al-Hunud fī ḥisāb al-tanjīm) - the number of folios is not indicated. Book on Indian siddhantas exposed in "Sindhind" (see (No 11, A1) ibn Ṭāriq).

A32. Correction of Zīj "al-Arkand" (Tahdhīb zīj al-Arkand) - the number of folios is not indicated. Correction of Arabic translation of an Indian Zīj, probably, "Khanda-khadyaka" of Brahmagupta.

A33. Representation of Both [Kinds of] Eclipses by Indians (Khayāl al-kusūfayn `inda'l-Hind) - the number of folios is not indicated.

A34. Answers to Questions asked by Indian Astronomers (al-Jawābāt `an al-masā'il al-wārida min munajjimī al-Hind) - manuscript in 120 folios.

A35. Answers to Ten Questions asked by the People of Kashmir (al-Jawābāt `an al-masā'il al-`ashara al-kashmīriyya) - the number of folios is not indicated.

A36. Enlightening the way for the Analysis of Zījes (Tanwīr al-minhāj ilā taḥlīl al-azyāj) - the number of folios is not indicated.

A37. Lucidity of Minds on the Zīj of al-Battānī (Jalā' al-adhhān fī zīj al-Battānī) - the number of folios is not indicated. Commentary on Zīj (No 137, A1) al-Battānī.

A38. Difficulties of Zīj of Ja`far Called Abū Mash`ar (`Ilal zīj Ja`far al-mukannā bi-Abī Ma`shar) - the number of folios is not indicated. Commentary on Zīj (No 88, A1) al- Balkh.

A39. Book on Stars Having Tails and Manes (Maqāla fī'l-kalām `alā'l-kawākib dhawāt al-adhnāb wa'l-dhawā'ib) - the number of folios is not indicated. Treatise on comets.

A40. Book on Consideration of what Abū Sahl al-Kūhī Told on Falling Stars (Maqāla fī taṣaffuḥ kalām Abī Sahl al-Kūhī fī'l-kawākib al-munqaḍḍa) - manuscript in 15 folios. Commentary on the work (No 277, A2) al-Kūhī.

A41. Book on Discussion of Known Method Mentioned in the "Book on Celestial Phenomena" (Maqāla fī'l-baḥth `an al-ṭarīqa al-muta`ārafa al-madhkūra fī kitāb al-āthār al-`ul-wiyya) - manuscript in 40 folios. Commentary on the work (No 317, A5) Ibn Sīnā.

A42. Book on the Reason why Zodiacal Signs are Indicated by Alphabetical Numeration in the Zijes (Maqāla fī `illat `alāmāt al-burūj fī'l-zījāt min ḥurūf al-jumal) - manuscript in 15 folios.

A43. Key to the Science of Astronomy (Miftāḥ `ilm al-hay'a) - the number of folios is not indicated. This work is also mentioned in "India" (No 348, E2) where al-Bīrūnī writes: "the rotation of the earth does in no way impair the value of astronomy, as all appearances of an astronomic character can quite as well be explained according to this theory as to the other. There are, however, other reasons which make it impossible. This question is most difficult to solve. The most prominent of both modern and ancient astronomers have deeply studied the question of the movement of the earth and tried to refute it. We, too, have composed a book on this subject called "Miftāḥ-`ilm-al-haya" (Key of Astronomy), in which we think we have surpassed our predecessors, if not in words, at all events in the matter" (al-Bīrūnī [4], I 277).

A44. Improvement of the Zīj of Ḥabash by [Discovery of] Defects and Correction of Errors in His Works (Takmīl zīj Ḥabash bi'l-`ilal wa taḥdhīb a`mālihī min al-zalal) - manuscript in 250 folios. Commentary on one of Zījes of Ḥabash al-Ḥāsib (No 46).

A45. Directions for what is Comprehensible or Incomprehensible in Distances (al-Irshād ilā mā yudrak wa mā lā yudrak min al-ab`ād) - the number of folios is not indicated.

A46. Book on the Use of Circles of Azimuth for Determining Centers of Astrological Houses (Kitāb fī isti`māl dawā'ir al-sumūt li-istikhrāj marākiz al-buyūt), manuscript in more than 100 folios.

A47. Questions of People of Balkh on Notions Related to the Abridgement of the Art [of Astrology] (al-Masā'il al-balkhiyya fī'l-ma`ānī al-muta`alliqa bi-inqiṣār al-ṣinā`a) - the number of folios is not indicated.

A48. Warning against the Art of Deception, that is the Predictions of Stars (al-Tanbīh `alā ṣinā`at al-tambīh wa-hiya aḥkām al-nujūm) - the number of folios is not indicated, is mentioned also in "Chronology" (No 348, E1) by al-Bīrūnī [2] (92).

A49. On the use of the Spherical Astrolabe (Fī isti`māl al-asṭurlāb al-kūrī) - manuscript in 10 folios.

A50. Book on Indication of the Proof in Measuring Time (Maqāla fī ta`bīr al-mīzān li-taqdīr al-azmān) - manuscript in 15 folios.

A51. On how the Indians Determine a Moment of Time (Fī taḥṣīl al-ān min al-zamān `inda al-Hind) - manuscript in 100 folios. "Al-ān" (moment), literal meaning (now); in this treatise probably indivisible particles of time are considered.

A52. Book of Testimonies on the Divergence in Observations (Kitāb al-istishhād bi-ikhtilāf al-arṣād), - is mentioned in "Chronology" (No 348, E1) by al-Bīrūnī [2] (12, 29, 167). Two astronomical works of al-Bīrūnī are mentioned by Yāqūt [1] (VI 310-311):

A53. Book on [Obtaining] the Value of the Magnitude of Night and Day by a Method far from the Methods of Astronomers and Their Terms (Kitāb fī i'tibār miqdār al-layl wa'l-nahār bi ṭarīq tab'udu 'an muwāḍa'āt al-munajjimīn wa al-qābihim). Treatise was written for Sultan Mas'ud.

A54. Book on Necessary things about two [Celestial] Movements (Kitāb fī lawāzim al-ḥarakatayn).

A55. [Sanskrit Translation of Ptolemy's "Almagest"] Sk - is mentioned in "India" (No 348, E2) by al-Bīrūnī [4] (I 127).

A56. [Sanskrit Translation of al-Bīrūnī's "Astrolabes"] Sk - is mentioned in "India" (No 348, E2): "Most of their [Indian scientific] books are composed in "Sloka", in which I am now exercising myself, being occupied in composing for the Hindus a translation of the books of Euclid and of the Almagest, and dictating to them a treatise on the construction of the astrolabe, being simply guided herein by the desire of spreading science" (al-Bīrūnī [4], I 127).

G1. Fifth Book of "Mas'udic Canon" (al-Maqala al-khāmisa li'l-Qānūn al-Mas'ūdī), 5th book of A1. Partial edition: Validi Togan [2]. German translations of chapters 5-7: Schoy [25, 26], of chapters 9 and 10: Hell and Wiedemann [4]. English translation of chapter 7: Barani [2]. English translation of chapter 9: Dallal [1]. Partial Russian translation of chapters 1 and 4: Sadyqov [4] (81-84, 92-95). Edition and Russian translation of chapters of chapters 9 and 10 related to Africa: Kubbel' and Matveyev [2] (120-132). Research: Barani [2], Dallal [1], Hasanov [4, 7], Schoy [20, 26], Wieber [2], Wiedemann and Hell [1].
Book in 11 chapters: 1-4) determining the longitudes and latitudes of cities, 5-6) determining the azimuth of one city at the second city, 7) determining the circumference of the terrestrial globe, 8-9) on parallels of terrestrial globe and 7 "climates", 10) geographical table of longitudes and latitudes of 581 cities and other points on the surface of the Earth from "Sofala of zinjes" (Mozambique) to lands of peoples Isu (Ves') and Yura (Yugra) in the "Land of Slavs" (ugro-finn tribes on the territory of modern European Russia), 11) problems for training.

G2. [Geographical Part (IV) of "Astrology", A2]. Partial German translation: Wiedemann [44]. Russian translation of chapter 10: AGL (248-250). Russian translation of some questions: Jalalov [2], Rosenfeld, Abdurahmanov and Rozhanskaya: al-Bīrūnī [41]. Edition and Russian translation of chapters related to Africa: Kubbel and Matveyev [2] (111-115). Research: Barani [2, 6], Hasanov [5, 7-8], Wiedemenn [44].
Questions 207-241: 207-209) terrestrial globe, 210-212) oicumene, continents, and seas, 213-219) determining longitudes and latitudes of cities, 220-224) length of day in various countries, setting and non-setting stars, 225-226) altitude and zenith distance of a celestial body, 227-229) gnomon and shadows, 230-235) azimuth, noon altitude, and shadow, Muslim prayer times, azimuth of Qibla, 236-241) seven climates and other subdivisions of oicumene, countries and cities in seven climates.

G3. "Geodesy" - Book on Determining Boundaries of Places for Determining the Distances between Settlements with more Accuracy (Kitāb taḥdīd nihāyāt al-amākin li-taṣḥīḥ masāfāt al-masākin) - Cairo (hay'a 84-85), Istanbul (SM Fatih 3386). Edition of the Istanbul manuscript by Bulgakov: al-Bīrūnī [19]. Edition by Tanji: al-Bīrūnī [20]. English translation by Jamil 'Alī: al-Bīrūnī [31]. Russian translation by Bulgakov: al-Bīrūnī [30]. Research: Askari [1] (on hydrography of Amudarya), Belenitskiy [3] (picture of the world), Berggren [1] (comparison with "Mathematical Collection" of Pappus), Bulgakov [1] (on sextant al-Fakhrī), [2] (general research), [3] (on al-Bīrūnī's terrestrial globe), Gulyamov [1-2] (on hydrography of Amudarya), Hasanov [6], Jan [1], Kennedy [28], Kramers [4], Krenkow [2] (general research), Leonov [1-3] (problems of geotectonics), Petri [1] (meridian of Mecca), Teshabayev [1], Validi Togan (picture of the world), Volin [1] (on changes of terrestrial surface).
Book in 38 chapters plus introduction. In the introduction the origin of science, terrestrial globe made by al-Bīrūnī at Kath, and formation of mountains are considered. Chapters: 1-5) determining the latitudes and longitudes of various cities and obliquity of ecliptic by al-Bīrūnī's forerunners and al-Bīrūnī himself, 6-25) determining the latitudes and differences of longitudes of various cities, 26-38) determination of the time of equinoxes by various scholars from Hyparchus to al-Bīrūnī in Gurganj and Ghazna.

G4. Book on Determining the Size of the Earth by Observation and Descent of the Horizon from the Summits of Mountains (Maqāla fī istikhrāj qadr al-arḍ bi-raṣad inḥiṭāt al-ufuq 'an qimam al-jibāl) - Berlin (5794 - a fragment). In HS1 it is mentioned that the manuscript is in 60 folios. Research: Wiedemann [101].

G5. Book of Construction of a [Terrestrial] Globe (Kitāb fī ṣan'at al-kura) - is mentioned in "Cartography" (No 348, M5) (see Ahmedov and Rosenfeld [2] (132), Suter [47] (81); Suter wrongly translated the title as "Book on the Construction of the Celestial Globe"). Undoubtly this globe coincides with the terrestrial globe described in "Geodesy" (No 348, G3), by al-Bīrūnī [31] (14).

HS1 informs on following geographical works of al-Bīrūnī:

G6. Book of Improvement of Reasonings with more Accuracy [Determining] Latitudes and Longitudes (Kitāb tahdhīb al-aqwāl fī taṣḥīḥ al-'urūḍ wa'l-aṭwāl) - manuscript in 200 folios.

G7. Book on Errors Made [by Copyists] in Latitude and Longitude (Kitāb taṣḥīf al-manqūl min al-`arḍ wa'l-ṭūl) - manuscript in 40 folios.

G8. Book on [Determining] the Longitude and Latitude of Cities of the Inhabited Part of the Earth with more Accuracy (Maqāla fī taṣḥīḥ al-ṭūl wa'l-`arḍ li-masākin al-ma`mūr min al-arḍ) - manuscript together with G9 in 20 folios.

G9. Book on Determining Cities According to Longitude and Latitude (Maqāla fī ta`yīn al-balad min al-`arḍ wa'l-ṭūl) - manuscript together with G8 in 20 folios.

G10. On Sunsets at Alexandria Lighthouse (Fī ghurūb al-shams `inda minārat al-Iskandariyya) - manuscript in 40 folios.

G11. On Divergence of Those Who Have the Dignity about Determining the Latitude and Declination (Fī ikhtilāf dhawī al-faḍl fī istikhrāj al-`arḍ wa'l-mayl) - the number of folios is not indicated.

G12. Book of Answers and Questions in [Determining] the Azimuth of Qibla with More Accuracy (Kitāb al-ajwiba wa'l-as'ila li-taṣḥīḥ samt al-Qibla) - manuscript in 30 folios.

G13. Explanation of Indications on Methods of Determining the Azimuth of Qibla (īḍā ḥ al-adilla `alā kayfiyyat samt al-Qibla) - manuscript in 25 folios.

G14. Improvement of Conditions of Operations for [Determining] the Azimuth of Qibla with more Accuracy (Tahdhīb shurūṭ al-`amal li-taṣḥīḥ sumūt al-qibal) - manuscript in 40 folios.

G15. On Correction of the Qibla at Bust by its Longitude and Latitude with More Accuracy (Fī taqwīm al-Qibla bi-Bust bi-taṣḥīḥ ṭūlihā wa `arḍihā) - manuscript in 15 folios.

G16. On Premises for [Determining] the Qibla with More Accuracy (Fī inbi`āth li-taṣḥīḥ al-Qibla) - manuscript in 45 folios.

G17. Removal of Errors which are in the "Book of Indications of Qibla" (Talāfī `awāriḍ al-zallāt fī Kitāb dalā'il al-Qibla) - the number of folios is not indicated. Commentary on the book (No 248, A1) of al-Amuli critized by al-Bīrūnī also in "Chronology".

G18. On Difference in the Subdivision on Climates (Fī'l-ikhtilāf al-wāqi` fī taqāsīm al-aqālīm) - manuscript in 20 folios.

G19. Determining the Boundaries of Inhabited Parts of the Earth and Correcting them [on a Map] (Taḥdīd al-ma`mūra wa taṣḥīḥuhā fī'l-ṣura) - the number of folios is not indicated.

Me1. "Densimetry" - Book on Ratios between Metals and Precious Stones by Volume and Weight (Maqāla fī'l-nisab allatī bayna al-filizzāt wa'l-jawāhir fī'l-ḥajm wa'l-wazn) - Beirut (Greek. 364/6), Hyderabad (riyāḍa 125). Abridged exposition: Abridgement of the Reasonning of Abū'l-Rayhan in His Treatise on Ratios between Metals and Precious Stones by Volume and Weight (Talkhīṣ kalām dhakarahū Abū'l-Rayḥān fī risāla lahū fī nisab al-filizzāt wa'l-jawāhir fī'l-ḥajm wa'l-wazn) - Book III of the book (No 476, Me1) of al-Khāzinī [1] (55-71). Separate manuscript of this chapter: Mashhad (392/2).Russian translation of the Beirut manuscrip by Rosenfeld and Rozhanskaya: al-Bīrūnī [49]. Russian translation of the abridgement in the book (No 476, Me1) by Rozhanskaya and Levinova: al-Khāzinī [2], 52-75). Partial Russian translation by Belenitskiy: al-Bīrūnī [22] (247-265). Research: Bauerreis [1], Belenitskiy [6], commentaries of translators mentioning Russian translations, al-Milli [1], Rosenfeld [42], Rozhanskaya [8] (106-109), [16, 21], Rozhanskaya and Rosenfeld [1], Wiedemann [47, 94].

Me2. Book on Measures of Volumes and Weights the Tests of which are Based on [Correspond] Golden Weights and Rods (al-Kitāb fī'l-makāyīl wa mawāzīn wa sharā'iṭ al-ṭayār wa'l-shawāhīn) - is mentioned by al-Bīrūnī in HS1; number of folios is not indicated.

Ph1. Release of Rays and Light from Errors written in Books (Tajrīd al-shu`ā `āt wa'l-anwār `an faḍā'iḥ al-mudawwana fī'l-asfār) - is mentioned by al-Bīrūnī in HS1 as manuscript in 55 folios.

Ph2. Book on Obtaining Rays by a Method farthest from the Methods of Hours (Maqāla fī taḥṣīl al-shu`ā `āt bi-ab`ād al-ṭuruq `an al-sā`āt) - is mentioned by al-Bīrūnī in HS1 as manuscript in 10 folios.

Ph3. Book on Description of Causes of Heat in the World and the Difference of Seasons of the Year (Maqāla fī ṣifat asbāb al-sukhūna al-mawjūda fī'l-`ālam wa ikhtilāf fuṣūl al-sana) - is mentioned by al-Bīrūnī in HS1 as manuscript in 45 folios.

Ph4. Explanation of Ways of Burning (al-Ibāna `an al-ṭarīqa al-muḥtaraqa) - is mentioned by al-Bīrūnī in "Shadows" (A3, see Ibn Sīnān [1], II 56).

Ph5. Book on Glitter (Kitāb al-lam`a) - is mentioned by Ghulam Husayn Jawnpury (No 1417), see Verma [1] (67).

Mt1. Book on [Bodies] which Shine in the Air and Appear above (Maqāla fī muḍī'āt al-jaww al-ḥāditha fi'l-`ulw) - is mentioned by al-Bīrūnī in HS1, the number of folios is not indicated.

Mt2. Refutation of Vicious Opinions of some Physicians about Celestial Bodies which Appear in the Air (Fī ibṭāl ẓunūn fāsida khaṭarat `alā qulūb ba`ḍ al-aṭibbā fī amr al-kawākib al-ḥāditha fi'l-jaww) - is mentioned by al-Bīrūnī in HS1 as manuscript in 70 folios.

Mt3. Representing Essences of Dawn and Twilight on Eastern and Western Sides of the Horizons (Taṣawwur amr al-fajr wa'l-shafaq fī jihatay al-sharq wa'l-gharb min al-ufuq) - is mentioned by al-Bīrūnī in HS1, the number of folios is not indicated.

Mi1. "Mineralogy" - Book of Collection of Information on Knowledge of Jewels (Kitāb al-jamāhir fī ma`rifat al-jawāhir). Edition by Krenkow: al-Bīrūnī [9], Russian translation by Belenitskiy: al-Bīrūnī [22]. German translation of the introduction: al-Hilālī [1]. Edition and Russian translation of chapter related to Africa: Kubbel and Matveyev [2] (127-138). Research: Anawati [4], Belenitskiy [1-2, 4-5, 8], al-Halabi [1], Sam. Hamarneh [7], Irisov [9], Kolchin [1], Lemmlein [1], Marupov [1], Mikhalevich [1], Nadvi [1] (ethical reflections), Ruska [1, 25], Validi Togan [2].

ME1. "Pharmacognozy" - Book of Medicines (Kitāb al-ṣaydana fi'l-ṭibb). Edition by Sotudi and Afshar: al-Bīrūnī [34], English translation by Said: al-Bīrūnī [35], Russian translation by Karimov: al-Bīrūnī [33]. German translation of the foreword: Meyerhof [5]. Research: Habib [1], Sam. Hamarneh [8], U. Karimov [4, 6], Meyerhof [8], Said [4], Ünver [1-2, 6].

PH1. [Questions to Ibn Sīnā] - questions on the answers of Ibn Sīnā (No 317, PH1).

PH2. Objections on Ibn Sīnā's book of Proof of Truth (Fī'l-i`tirāḍ `ala kitāb Ibn Sīnā Ḥujjat al-Ḥaqq) - Tehran (429/2, 599/4, 1968, 2785/9, 2827/1; Univ. 866-868). Persian translation: Dihkhuda [1] (58-64). Russian translation: Sharipov [3] (38-42), al-Bīrūnī [45]. Objection to Ibn Sīnā's answers 1-5, 7, and 10 for questions of al-Bīrūnī on Aristotle's book "On the Heavens" and to his answers for questions of al-Bīrūnī on Aristotle's "Physics" (see No 317, PH1).

PH3. Book of Indian Patanjala on Deliverance from Phantoms (Kitāb Batanjal al-hindī fi'l-khalāṣ min al-amthāl). Edition and research: Ritter [8]. Research: Pines [16].

349 ELIAS BAR SHINAYA

Eliās bar Shināyā (Iliyā al-Maṭrān) (975 - ca 1050), Nestorian Christian, began his monastic life in Mosul, became Bishop in Beth Nuhadhre in 1002, Metropolitan (al-maṭrān) of Nisibis in 1008, Syrian historian, grammarian, lexicographer, theologian, and metrologist, wrote in Syriac and Arabic.

See: IHS [1] (I 735-736), MAMS (II 295-296), SSM (118); Assfalg [2] (LM), Baumstark [1] (287-288), Saliba [5], W. Wright [1] (235-239).

Me1. Book on Weights and Measures (Kitāb fi'l-awzān wa'l-makāyīl) = Book on Measures and Weights (Maqāla fi'l-makāyīl wa'l-mawāzīn) - Cairo (riyāḍa 92, 1046. Taymūr riyāḍa 199, 341), Gotha (1331), Paris (206/10). Description of the manuscripts: Ibel [1] (99-103). Research: Sauvaire [1]. Book in 16 chapters.

H1. Chronography (Makhtebhānūth zabhnē) Sy - historical treatise containing chronicle. Some records in this chronicle are in Arabic; these records contain many fragments from historical treatises of al-Khwārizmī (No 41, H1) and Thabit Ibn Sīnān (No 197, H1) which are absent in other sources. Edition by Brooks with Latin translation: Bar Shinaya [3]. Edition by Lamy with French translation: Bar Shinaya [1]. French translation: Delaporte [1]. Partial edition with German translation: Baethgen [1].

H2. Book of the Proof of Right (Kitāb al-burhān `alā' al-ṣaḥīḥ). German translation by Horst: Bar Shinaya [2]. Nestorian theological treatise.

L1. Book of the Translator on the Study of Syriac (Kitāb al-tarjumān fī ta`līm lughat al-suryān). Edition: de Lagarde [1]. Edition with English translation: Gottheil [1].

350. MUHAMMAD IBN NASR

Muḥammad ibn Naṣr ibn Sa`īd (11-12th c.), astronomer.

See: KZ (III 366), MAA (215), MAMS (II 296).

A1. Treatise on the crab-shaped Astrolabe with Wings (Risāla fi'l-asṭurlāb al-saraṭānī al-mujannaḥ) - Escorial (II 961/4). Description of the manuscript: Derenbourg [7] (98). Treatise in 23 chapters. Probably, it is a revision of the work (No 299, A19) of Ibn Iraq with the same title.

351. ABU MUHAMMAD AL-RAZI

Abū Muḥammad al-Rāzī (11th c.), from Rayy, mathematician.
See: GAS (V 392), MAMS (II 296).
M1. Book on Determining Distances (Kitāb fī akhdh al-ab`ād) - Istanbul (SM AS 4830/16).

352. MUHAMMAD AL-JUYUBI

Muḥammad ibn Ḥasan al-Juyūbī (11th c.), (his name comes from juyūb = sines), mathematician.
See: SSM (51).
M1. Explanation of Sphere (Tashrīḥ al-kura) - Cairo (mīqāt 1202).
Treatise on spherical trigonometry quoting Ibn Qurra (No 103), Abū'l-Wafā' (No 256), al-Khujandī (No 269), Ibn `Irāq (No 299), Ibn Labbān (No 308), Ibn Sīnā (No 317) and al-Bīrūnī (No 348).
M2. [Treatise on Composed Ratios] - is mentioned in M1.

353. `ALI IBN ABI'L-RIJAL

Abū'l-Ḥasan `Alī ibn Abī'l-Rijāl al-Shaybānī al-Qayrawānī al-Maghribī (ca 960 - ca 1050), from Qayrawan, astronomer and astrologer, worked in Northern Africa and Sicily; was known by the name "Abenrage" in medieval Europe.
See: IHS (I 715-716), KZ (II 4), MAA (100, 214), MAA² (172-173), MAMS (II 296-297), SSM (46-47); Baldi [1] (493-508), Griffini [1] (EI), Pingree [10] (EI²), Stegemann [1], Suter [40] (EI), [50] (IA).
M1. Reckoning [Book] (al-Ḥāsibiyya) - Manchester (Lind. 647b).
M2. Poem on Arithmetic (Urjūza ḥisāb). Commentary: (No 910, M1) by al-Maghribī.
A1. The Most Perfect [Book] on the Predictions of Stars (al-Bāri` fī aḥkām al-nujūm) - Cairo (Fāḍil mīqāt 12, Khalīl mīqāt 1, Ṭal`at mīqāt 100, 149, 231, 246). Latin translation: Ibn Abī'l-Rijāl [1]. Spanish translation: Ibn Abī'l-Rijāl [2].
A2. [Poem on Astrology] - Cairo (mīqāt 939), Paris (2541).

354. MUHAMMAD AL-MAJRITI

Abū Maslama Muḥammad ibn Ibrāhīm ibn `Abd al-Dā'im al-Majrīṭī (11th c.), from Madrid, alchemist; is often confused with Maslama ibn Aḥmad al-Majrīṭī (No 281).
See: GAS (IV 294-298), MAMS (II 297).
Me1. Weights in Science on Balance (al-Awzān fī `ilm al-mīzān) - Cairo (tabī`iat 4).

355. GHALIB AL-HAWWARI

Abū Tamām Ghālib ibn Muḥammad ibn `Abd al-Raḥmān al-Hawwārī al-Ashūnī (986-1049), from Seville, pupil of Ibn al-`Aṭṭār (No 284) in Cordoba, arithmetician.
See: MAA (100-101), MAMS (II 297); Ibn Bashkuwāl [1] (II 448).

356. AHMAD AL-GHANDAJANI

Abū'l-Qāsim Aḥmad ibn Muḥammad ibn Ja`far al-Ghandajānī (11th c.), from Ghandagan near Shiraz, astronomer.
G1. Treatise on the Azimuth of Qibla (Risāla fī samt al-Qibla) - Oxford (I 913/10). Facsimile edition of the manuscript and English translation: Suzuki [1].

357. MUHAMMAD IBN AL-BURGHUTH

Abū `Abdallāh Muḥammad ibn `Umar ibn Muḥammad (died 1052), known by the name "Ibn Burghūth", astronomer, pupil of al-Ghāfiqī (No 312).
See: MAA (101), MAMS (II 297); Ibn al-Abbār [1] (I 124), al-Maqqarī [1] (II 448), Tugan [1] (342).

358. SA` ID IBN AL-BAGHUNISH

Abū `Uthmān Sā`īd ibn Muḥammad ibn al-Baghūnish (977-1052), from Toledo, pupil of al-Majrīṭī (No 281) in Cordoba; physician, arithmetician and geometer.

See: GAS (V 387), MAA (101), MAMS (II 297-298), UA (II 48-49); Ibn al-Abbār [1] (II 711).

M1. Book of Abū `Uthman Sa`id (Liber Saydi Abuothmi). Edition of the medieval Latin translation: Busard [4] (169-171).

Research: Busard [4], Suter [21].

359. `ABD AL-RAHMAN AL-MALAQI

`Abd al-Raḥmān ibn Maslama ibn `Abd al-Malik ibn al-Walīd al-Qurashī al-Mālaqī (978-1055) from Malaga, known by the name "Abū Muḥammad al-Muṭarrif", worked in Seville; arithmetician, scholar of Qur'anic studies, law, and medicine.

See: MAA (101), MAMS (II 298); Ibn Bashkuwāl [1] (I 328).

360. YAHYA IBN KHAYYAT

Abū Bakr Yaḥyā ibn Aḥmad (ca 985-1055), known by the name "Ibn Khayyāt" (son of a tailor), physician and astrologer, pupil of al-Majrīṭī (No 281), died in Toledo.

See: MAA (101-102), MAMS (II 298), UA (II 50).

361. IBRAHIM AL-FAHMI

Abū Isḥāq Ibrāhīm ibn Muḥammad ibn Ashaḥ al-Fahmī (d. 1056), from Toledo; arithmetician and knowledgeable in literature and inheritance.

See: MAA (102), MAMS (II 298); Ibn Bashkuwāl [1] (I 94).

362. MUHAMMAD IBN MURSHID

Abū'l-Qāsim Muḥammad ibn `Abdallāh ibn Murshid (ca 965-1057), former slave of Ibn Ṯumlus Vizier of Cordoba; cryptographer, mathematician and astrologer.

See: MAA (102), MAMS (II 298); Ibn al-Abbār [1] (I 125).

363. `UMAR AL-HADRAMI

Abū Muslim `Umar ibn Aḥmad ibn Khaldūn al-Ḥaḍramī (d. 1057), from Seville, pupil of al-Majrīṭī (No 281), philosopher, mathematician, astronomer and physician; one of the ancestors of historian Ibn Khaldūn (No 771).

See: MAA (102), MAMS (II 298), UA (II 41); al-Maqqarī [1] (II 232).

Suter [21] identifies him with the author of "Liber Aderameti" extant in medieval Latin translation (edition: Busard [4] (171-174), research: GAS (V 394-395); Björnbo [2], Busard [4]).

364. AL-MUBASHSHIR AL-AMIRI

Abū'l-Wafā al-Mubashshir ibn Fātik al-Qā`id al-Āmirī (11th c.), an Egyptian Amir; pupil and friend of Ibn al-Haytham (No 328), mathematician and astronomer; also knew medicine well.

See: KZ (II 439, V 435), MAA (I 311), MAMS (II 299), UA (II 98-99); al-Suyūṭī [1] (I 311).

HS1. Chosen from Wisdoms and Beauties of Aphorisms (Mukhtār al-ḥikam wa maḥāsin al-kalim) - Leiden (515).

365. AL-HUSAYN AL-WANNI

Abū `Abdallāh al-Ḥusayn ibn Muḥammad al-Wannī al-Faraḍī al-Ḥāsib (d. 1059), from Wann, Khuzistan; knowledgeable in inheritance (al-faraḍī) and arithmetic (al-ḥāsib); worked in Baghdad.

See: KWA (I 146), KWA² (I 421), MAA (103), MAMS (II 299).

366. YAHYA AL-TAKRITI

Abū-Naṣr Yaḥyā ibn Jarīr al-Takrītī (11th c.), from Takrit near Baghdad, physician and astrologer of Naṣīr al-Dawla ibn Marwān (1011-1061), prince of Diyarbakır.

See: GAL (I 623-624), GAL² (I 862-863), GAS (VI 19-20), KZ (V 439), MAA (103), MAMS (II 299), SSM (44), UA (I 243).

M1. [Treatise on Complete Quadrilateral] - Cairo (Taymūr riyāḍa 140/15 - a fragment).

A1. [Zīj for the Year 400 h.] - Cairo (Taymūr riyāḍa 140/18 - a fragment on ratios of diameters of planets).

367. SULAYMAN AL-MAWSILI

Abū Manṣūr Sulaymān ibn al-Ḥusayn ibn Bardawayh ibn Ibrīsamī al-Mawṣilī al-Ḥāsib (11th c.), from Mosul, astronomer and astrologer.

See: GAL² (I863), GAS (VII 19-20), SSM (44).

A1. Book Selected from amongst the Books on Celestial Selections (al-Kitāb al-mukhtār min kutub al-ikhtiyārāt al-falakiyya) - Cairo (Ṭal'at mīqāt 251), Istanbul (BU 4597; NO 2804). Description of the Istanbul manuscripts: SHIM (481). The Istanbul manuscript BU 4597 is ascribed to al-Takrītī (No 366). Treatise in 5 books and 31 chapters.

368. IBN AL-NABDI

Ibn al-Nabdī (11th c.), Egyptian constructor of astronomical instruments.

See: MAA (103), MAMS (II 299), TH (440).

369. `ALI IBN RIDWAN

Abū'l-Ḥasan `Alī ibn Riḍwan ibn `Alī ibn Ja`far (998-1061), born in Giza near Cairo, physician, mathematician, and astrologer, worked and died in Cairo.

See: GAL (I 638-639), GAL² (I 866), GAS (III 35-42, 81-87, 155-157, VII 44), HD (356), HD² (234), HMA (I 525-530), IHS (I 729-730), KZ (I 446, IV 109, VI 50), MAA (103-104), MAMS (II 299-300), SSM (49), UA (II 99-105); Arnaldez [4] (DSB), Baldi [1] (467-491), G. Gabrieli [6], Iskandar [5] (ENWC), Wüstenfeld [1] (80-82).

M1. Book on Existence of Points and Lines in Nature (Maqāla fī wujūd nuqaṭ wa khuṭūṭ ṭabī`iyya) - is mentioned in UA.

A1. [Horoscope for the beginning of 855 h.] - Cairo (majlis 213/1, mīqāt 632/4). Horoscope for February 1451.

A2. [Commentary on Ptolemy's "Tetrabiblos"]. Edition of medieval Latin translation: Ibn Riḍwān [1]. Edition of a fragment containing the information on Ibn Riḍwān's observation of a new star in 1006. English translation of this fragment and research: Goldstein [4a]. Commentary on the astrological work of Ptolemy, containing information on astronomical observations of the author, in particular, his observation of the new Supernova in 1006.

ME1. Book Sufficient for the Physician (Kitāb kifāyat al-ṭabīb). Edition with French translation and commentery by Grand' Henry: Ibn Riḍwān [2].

ME2. Treatise on Deliverance of Bodies from the Harmful Influence of Egypt's Climate (Risāla fī daf` maḍārr al-abdān bi-arḍ Miṣr). Edition and research: Sezgin [20]. Edition by Jalal with English translation by Dols: Ibn Riḍwān [3].

370. MUHAMMAD IBN AL-LAYTH

Muḥammad ibn Aḥmad ibn Muḥammad ibn al-Layth (d. 1063), pupil of Ibn Burghūth (No 357); mathematician, astronomer, knew linguistics and law well; died near Valencia.

See: MAA (104), MAMS (II 200); Ibn al-Abbār [1] (I 127), al-Maqqarī [1] (II 232).

371. MUHAMMAD AL-SARAQUSTI

Muḥammad ibn Sa`īd al-Saraqusṭī (11th c.), from Zaragoza, known by the name "Ibn al-Mashshāṭ" (son of a hairdresser), studied in Egypt.

See: MAA (104), MAMS (II 300); Ibn al-Abbār [1] (I 127).

372. `UMAR AL-HAWZANI

Abū Ḥafṣ `Umar ibn Ibrāhīm ibn Muḥammad al-Hawzanī "Ibn Abī Hurayra" (1003-1063), from Seville, knew arithmetic and other sciences well.
See: MAA (104), MAMS (II 300); Ibn Bashkuwāl [1] (I 393).

373. `ABD AL-RAHMAN AL-KALBI

Abū Zayd `Abd al-Raḥman ibn `Abdallāh ibn Sayyid al-Kalbī (d. 1064), from Valencia, arithmetician and geometer.
See: MAA (104), MAMS (II 300); Ibn al-Abbār [1] (II 550).

374. `ALI IBN HAZM

Abū Muḥammad `Alī ibn Aḥmad ibn Sa`īd ibn Ḥazm al-Andalusī (993-1064), born in Cordoba, worked in Cordoba and Almeria; theologian, poet, historian, and naturalist.
See: GAL (I 505-506), GAL^2 (I 692-697), IHS (I 713), KZ (I 176, 346, II 389, 522, 629, III 238, 617, IV 227, V 31, 73, 429, 471, 486, VI 115, 278, 380), MAMS (II 300-301); Arendonk [2] (EI), [6] (IA), Arnaldez [1], [2] (EI^2), Asin Palacios [5], Ye. Bertel's [5], Chejne [1], Singer [3] (LM).
E1. The Dove's Necklace about Love and Lovers (Ṭawq al-ḥamāma fi'l-ulfa wa'l-ullāf). Edition by Petrov: Ibn Hazm [2], Edition by al-Sayrati: Ibn Hazm [7]. Edition with French translation by Bercher: Ibn Ḥazm [6]. English translations by Nykl and Arberry: Ibn Ḥazm [3, 9]. German translation by Weissweiler: Ibn Ḥazm [5]. Spanish translation by Garcia Gomez: Ibn Ḥazm [8]. Russian translation by Sal'ye: Ibn Ḥazm [4]. Research: Sal'ye [1], Samsó [6a], Wiedemann [58]. Treatise on love and sexual problems, contains a chapter on the properties of magnet and on striking fire from a stone (Ibn Ḥazm [4], 19-20). Research: Wiedemann [58].
PH1. The Criterion Book on Religions, Heresy, and Sects (Kitāb al-faṣl fi'l-milal wa'l-ihwā' wa'l-niḥal). Edition: Ibn Ḥazm [1]. Research: Asin Palacios [5]. Theological treatise containing information on history of science, in particular, extracts on space and time from the work (No 142, M1) of al-Rāzī.
PH2. Treatises (Rasā'il). Edition: Ibn Ḥazm [10]. Treatises in theology, ethics, and law.

375. AL-HUSAYN AL-TUJIBI

Al-Ḥusayn ibn Aḥmad ibn al-Ḥusayn ibn Ḥayy al-Tujībī (d. 1064), from Cordoba, pupil of Ibn Burghūth (No 357) and al-Karmānī (No 377), mathematician and astronomer; traveled in the Mashriq, died in Yemen.
See: MAA (105-106), MAMS (II 301); al-Maqqarī [1] (I 577, II 232), Tuqan [1] (347).

376. BAHMANYAR IBN AL-MARZUBAN

Abu'l-Ḥasan Bahmanyār ibn al-Marzubān (d. 1065), Azerbaijani philosopher, pupil of Ibn Sīnā (No 317).
See: GAL (I 599-600), GAL^2 (I 828), KZ (II 217, III 256), MAMS (II 301-302); Anonymous [1a], Guseynov [1], J. Mamedov [1], Poper [1], Saghadeyev [11], U. Sultanov [3] (64-80), Ülken [4] (207-208), Wiet [2] (EI^2), Zakuyev [6], [7] (FE), [12].
E1. Acquirement [of Knowledges] (al-Taḥṣīlāt) - Beirut (380), Hyderabad (riyāḍa 372/3), Leiden (1482/4), London (978/8), Rampur (I 117), Rome (Vat. 1410), Tehran (28, 111). Edition: Bahmanyar [1]. Research: Guseynov [1], Saghadeyev [12]. Exposition of the work (No 317, E3) of Ibn Sīnā in 3 books: 1) logic, 2) metaphysics, 3) physics and cosmology.

377. `AMR AL-KARMANI

Abu'l-Ḥākim `Amr ibn `Abd al-Raḥmān ibn Aḥmad ibn `Alī al-Karmānī (ca 965-1066), born in Cordoba, came from Carmona, mathematician and physician, traveled in the Mashriq, died in Zaragoza.
See: IHS (I 715), MAA (105), MAMS (II 302), UA (II 40); al-Maqqarī [1] (II 232), Tuqan [1] (335).

378. MUHAMMAD AL-DAWWANI

Abū'l-Fatḥ Muḥammad ibn al-`Abd al-Malik al-Dawwānī (10-11th c.), mathematician.
See: SSM (51).
M1. [Treatise on] a Mistake of Banū Mūsa's Proof of the Last Proposition ([Risāla fī] sahw waqa`a li-Banī Musa fī'l-burhān `alā'l-shakl al-akhīr) - Cairo (majlis 3626/55), Istanbul (4832). Commentary on a geometric treatise of Banū Mūsa (No 74, M3).

379. AHMAD AL-SADAFI

Abū Ja`far Aḥmad ibn Mughīth ibn Aḥmad al-Ṣadafī (1015-1067), from Toledo, knowledgeable in traditions and inheritance; was a mathematician and a linguist.
See: KZ (VI 96), MAA (105-106), MAMS (II 302); Ibn Bashkuwāl [1] (I 62).

380. `ABDALLAH IBN AHMAD

`Abdallāh ibn Aḥmad (11th c.), from Zaragoza, pupil of Ibn Burghūth (No 357), mathematician and astronomer.
See: MAA (106), MAMS (II 302); al-Maqqarī [1] (II 232).

381. MUKHTAR AL-RU`AYNI

Abū'l-Ḥasan Mukhtār al-Ru`aynī (11th c.), pupil of Ibn Burghūth (No 357), geometer and astronomer.
See: MAA (106), MAMS (II 302); al-Maqqarī [1] (II 232), Tuqan [1] (343).

382. `ISA AL-WASITI

`Īsā ibn Aḥmad ibn Thābit ibn Abū'l-Jahm al-Wāsiṭī (11th c.), from Wāsiṭa, South of Cordoba; mathematician, was taught by his father Aḥmad al-Wāsiṭī (d. 1046).
See: MAA (106), MAMS (II 302); Ibn Bashkuwāl [1] (II 640), Tuqan [1] (346).

383. MARWAN AL-`ARQI

Abū `Abd al-Malik Marwān ibn Ḥākim al-`Arqī (996-1070), from Seville, pupil of al-Ṭunayzī (No 303), arithmetician.
See: KZ (III 154), MAA (106), MAMS (II 303); Ibn Baskquwal [1] (II 558).

384. SA`ID AL-ANDALUSI AL-QURTUBI

Abū'l-Qāsim Sā`id ibn Aḥmad ibn `Abd al-Raḥmān ibn Muḥammad ibn Ṣā`id al-Andalusī al-Qurṭubī (1029-1070), known by the names "Ibn Ṣā`id" and "Qāḍī Ṣā`id"; born in Almeria, worked in Toledo; was Judge (qāḍī) and jurist, historian, mathematician, and astronomer; pupil of al-Waqshī (No 406) in exact sciences, his astronomical observations were used by al-Zarqālī in "Toledan Zīj" (No 402, A6).
See: IHS (I 776-777), KZ (II 318, 636, III 465, IV 111, 133-134), MAA (106-107), MAMS (II 303); Ibn Bashkuwāl [1] (I 234), Plessner [3a], Salem [1] (ENWC).
A1. Improvement of [Theory of] the Motion of Planets (Iṣlāḥ ḥarakāt al-kawākib) - is mentioned in his treatise H1 (al-Andalusī [1], 72-73). Research: Richter-Bernburg [2].
H1. Book of Definitions According to the Kinds (Kitāb al-ta`rīf bi-ṭabaqāt al-umam). Edition by Cheikho: al-Andalusī [1]. French translation by Blachère: al-Andalusī [2]. English translation by Salem and Kumar: al-Andalusī [3]. Research: M. S. Khan [1-3]. Historical treatise containing exposition of history of astronomical observations. Research of chapters related to astronomy: Richter-Bernburg [2].

385. MUHAMMAD AL-`ATTAR

Muḥammad ibn Khayra al-`Aṭṭār (11th c.), from Toledo, former slave, pupil of al-Ghāfiqī (No 312) and Ibn Burghūth (No 357), worked in Cordoba; arithmetician and knowledgeable in inheritance.
See: MAA (107), MAMS (II 303); Ibn al-`Abbār [1] (I 128), Tuqan [1] (345).

386. AHMAD AL-KHATIB AL-BAGHDADI

Abū Bakr ibn `Alī ibn Thābit al-Khāṭib al-Baghdādī (1002-1071), from Baghdad, historian and astronomer.

See: GAL² (I 562-564), MAMS (II 303-304); Marçais [1] (EI), [2] (IA).

A1. Treatise on the Science of Stars (Risāla fī `ilm al-nujūm) - Istanbul (SM Aşir 190).

H1. History of Baghdad (Ta'rīkh Baghdād). Edition of introduction with French translation by Salmon: al-Baghdādī [1]. Complete edition in 14 volumes: al-Baghdādī [2].

H2. History of City of Damascus (Ta'rīkh madīnat Dimashq). Edition: al-Baghdādī [3].

387. `ABD AL-RAHMAN AL-LAKHMI

`Abd al-Raḥmān ibn Muḥammad ibn `Abd al-Karīm ibn Yaḥyā al-Lakhmī (997 - ca 1070), vizier of Dhu'l-Nūn in Toledo; mathematician, knowledgeable in philosophy and medicine.

See: MAA (107), MAMS (II 304), TH, UA (II 49).

388. `ABD AL-RAHMAN AL-MURADI

`Abd al-Raḥmān ibn Khalaf ibn `Asākir al-Murādī (11th c.), pupil of Ibn al-Baghūnīsh (No 358), physician and constructor of mechanical devices.

See: MAA (107), MAMS (II 304), UA (II 50); al-Andalusī [1] (86), Sabra [19] (280).

Me1. Book of Mysteries on Achievements of Thought (Kitāb al-asrār fī natā'ij al-afkār) - Florence (152/1).

Research: Sabra [19] (277-280), Vernet [22], Vernet, Casals, and Villuendas [1].

389. ISHAQ IBN YUNIS

Isḥaq ibn Yūnis (d. ca 1080), pupil of Ibn al-Haytham (No 328), worked in Cairo; physician, philosopher, and arithmetician.

See: MAA (107), MAMS (II 304), UA (II 99).

M1. [Super-commentary on Commentary by Ibn al-Haytham on Diophantus' "Arithmetic"] - is mentioned in (No 328, HS1) by Ibn al-Haytham and in UA.

390. AHMAD AL-MUQTADIR

Aḥmad al-Muqtadir, ruler of Zaragoza in 1046-1081 from Banū Hūd dynasty, knew philosophy, mathematics, and astronomy well.

See: MAA (108), MAMS (II 305); Bosworth [2] (43), Lane-Poole [1] (19), al-Maqqarī [1] (I 206).

391. YUSUF AL-MU'TAMAN

Yūsuf al-Mu'taman ibn Aḥmad al-Muqtadir, ruler of Zaragoza in 1081-1085, son of Aḥmad al-Muqtadir (No 390); mathematician, astronomer also knew philosophy well.

See: IHS (I 759), MAA (108), MAMS (II 305); Bosworth [2] (43), Djebbar [2], Hogendijk [29], [35] (ENWC), Lane-Poole [1] (19-26), al-Maqqarī [1] (II 141), Steinschneider [13].

Memorial Collection:"al-Mu'taman" [1]

M1. Book of Improvement (Kitāb al-istikmāl) - Cairo (Fāḍil riyāḍa 40/1, 40/2) first part, Copenhagen (82), Damascus (`āmm 5648), Leiden (123), only fragments. Authorship of these fragments by al-Mu'taman and their order was established by Hogendijk [10]. Treatise is devoted to geometry and number theory. Research: Hogendijk [10-11, 16, 24, 28a, 31, 31a], Djebbar [5b, 5c, 5d]

Ph1. Book on Improvement of Optics (Kitāb al-istikmāl al-manāẓir) - is mentioned by Yūsuf al-Sabtī in the work (No 555, E1), see Steinschneider [13].

392. `ABDALLAH AL-KHABRI

Abū Ḥakīm `Abdallāh ibn Ibrāhīm al-Faraḍī al-Khabrī (d. 1083), from Khabr near Nishapur, Khurasan, pupil of al-Wannī (No 365); arithmetician, knowledgeable in inheritance (al-faraḍī) and literature.

See: KWA (I 421), MAA (108), MAMS (II 305); Pingree [36] (EIr).

M1. Concise Exposition of Arithmetic (Talkhīṣ al-ḥisāb) - is mentioned in KWA.

393. NASIR-I KHUSRAW

Abū Mu`īn Nāṣir ibn Khusraw ibn Ḥārith (Nāṣir-i Khusraw) al-Qabādiyānī al-Marwazī (1004-1088), born in Qabadiyan near the modern town Nosiri Hisraw in Tajikistan (named in his honour), one of the founders of isma`ilite theosophy; lived in Balkh, in Ghazna at the court of Ghaznawid sultans Maḥmūd and Mas`ūd; in Marw under Seljukid Chaghri Beg. Traveled in countries stretching from Maghrib to India. While in Egypt, he was converted to Isma`ilism and became the Isma`ilite exponent in his fatherland. When he was persecuted, he sought protection on Pamir mountains in Yomghan (now in Afghanistan).

See: IHS (I 768-769), MAMS (II 305-307), PL (I 1138-1141); Ashurov [2-3], K. Ayni [1], A. Bertel's [1-2], Ye. Bertel's [1], [2] (EI), [7] (IA), Browne [3] (II 218-248), [4], Buzurg-zoda [1], Ethé [1], W. Ivanov [3], Rosenfeld [58] (ENWC).

M1. Marvels of Arithmetic and Wonders of Calculators (Gharā'ib al-ḥisāb wa`ajā'ib al-ḥussāb) - Tehran (Malik 640/8) - a fragment containing problems Nos 30-31. The book is mentioned in the work PH2 by Nāṣir-i Khusraw [15] (307-308); see Ashurov [1] (37), Bagheri [1] (194), and A. Berthels [1] (205-206). The book contains 200 problems. Edition and English translation of the extant fragment: Bagheri [1] (195-196). Research: Bagheri [1].

PH1. Book of Provision for Travellers (Kitāb zād al-musāfirīn). Edition by Bazl al-Raḥmān: Nāṣir-i Khusraw [8]. Research: Ashurov [1, 3]. Compendium of Isma`ilite philosophy. containing information on history of sciences, in particular, extracts from non-extant treatises of al-Razi (No 142, M1 and Ph1).

PH2. Philosophical Treatises: a) Book Joining two Wisdoms (Kitāb-i jāmi` al-ḥikmatayn) P. Edition by Corbin and Mu`in: Nāṣir-i Khusraw [16]. Research: Corbin [1], Treatise on "harmony" between Greek philosophy and Isma`ilite theosophy. b) Face of the Faith (Wajh-i dīn). Edition by Taqi Erani: Nāṣir-i Khusraw [9]. c) Book of Light (Rawshanaī-nāma) P. Edition with German translation by Ethé: Nāṣir-i Khusraw [4], edition with English translation by W. Ivanov: Nāṣir-i Khusraw [14], edition: Nāṣir-i Khusraw [10] (510-544). Tajiki edition by K. Ayni: Nāṣir-i Khusraw [17] (151-177). Abridged poetic exposition of treatises PH1 and PH2. d) Book of Fortune (Sa`ādat-nāma) P. Edition with French translation by Fagnan: Nāṣir-i Khusraw [1], edition: Nāṣir-i Khusraw [10] (545-561). Tajiki edition by K. Ayni: Nāṣir-i Khusraw [17] (125-147). A philosophical poem. e) Meal of Brothers (Khwān al-ikhwān) P. Edition by al-Khashshab: Nāṣir-i Khusraw [13]. Research: al-Khachab [1]. f) Discovery and Liberation (Gushāyish u rahāyish) P. Edition by Naficy: Nāṣir-i Khusraw [15].

G1. Book of Travel (Safar-nāma) P. Edition by Ghani-zade: Nāṣir-i Khusraw [6]. French translation by Schefer: Nāṣir-i Khusraw [3], English translation by Le Strange: Nāṣir-i Khusraw [5]. Russian translation by Ye. Bertel's: Nāṣir-i Khusrau [11].

L1. Diwan of Poems (Diwān-i ash`ār) P. Edition: Nāṣir-i Khusraw [10]. Tajiki edition by K. Ayni: Nāṣir-i Khusraw [17]. German translation of qasidas by Ethé: Nāṣir-i Khusraw [3]. Russian translation by A. Adalis a.o.: Nāṣir-i Khusraw [13]. Research: K. Ayni [1], by Tagi-zade: Nāṣir-i Khusraw [9] (1-96).

394. `ALI AL- BAZDAWI

Abū'l-Yusr `Alī ibn Muḥammad al-Bazdawī (d. 1089), was judge in Samarkand, where he died.

See: GAL (I 460), GAL² (I 637-638), SSM (50).

A1. Treatise on the Azimuth of Qibla (Risāla fī samt al-Qibla) - Cairo (Sohag). Edition with English translation: King [33].

395. MAHMUD AL-KASHGHARI

Maḥmūd al-Kāshgharī (11th c.), Uyghur, pupil of Ibn Sīnā (No 317), lexicographer and geographer.

See: AGL (269-270), GAL² (I 196); Hasanov [1], Hazai [1] (EI²).

L1. Dictionary of Turkish Dialects (Dīwān lughāt al-Turk) T. Turkish translations by Atalay and Bilge: Atalay [1], al-Kāshgharī [1]. Uzbeki translation by Mutallibov: al-Kāshgharī [2]. Russian translation: Mutallibov [1]. Partial Russian translation: "Materialy" [2] (390-392). Research: Ahilly [1], Mutallibov [1], Umnyakov [1]. Linguistical work containing the oldest Turkish spherical map of the world. Balasughun, the capital of the Uyghur Kingdom is at the center of this map instead of Mecca, the city which is usually situated at the center of the Muslim maps. The book was written in 1072-1074.

396. NA`MA AL-ZAYDI

Na`ma ibn Aḥmad al-Zaydī(11th c.), astronomer.
See: GAL (I 870), GAS (VI 287), MAMS (II 307).
A1. Treatise on Protractor that is Sufficient on Operations (Risāla fi'l-dastūr wa kifāyat al-`amal bihī) - Istanbul (TK 3509/7). Description of the manuscript: SHIM (520-521). Research: Schmalzl [1] (62-65). Treatise in 18 chapters on an instrument for drawing the tympanum of astrolabes.

397. `ABDALLAH AL-WAHRANI

Abū Muḥammad `Abdallāh ibn Yūnis ibn Ṭalḥa ibn `Amrūn al-Wahrānī(11th c.), born in Oran, Algeria, worked in Seville; knew arithmetic and medicine well.
See: MAA (108), MAMS (II 307); Ibn Bashkuwal [1] (I 292).

398. `ABD AL-RAHMAN AL-YAHSABI

Abū Zayd `Abd al-Raḥmān ibn `Abdallāh ibn `Iyāḍ al-Yaḥṣabī al-Mukattib (11th c.) from Zaragoza; scholar of Qur'anic studies and arithmetician.
See: MAA (108), MAMS (II 307); Ibn al-Abbār [1] (II 552).

399. MUHAMMAD IBN AL-QARNI

Abū `Abdallāh Muḥammad ibn al-Ḥasan al-Qarnī (11th c.), Sicilian reckoner and astronomer.
See: MAA (109), MAMS (II 307); Amari [1] (595).

400. `UMAR IBN AL-QUNI

Abū Ḥafṣ `Umar ibn al-Ḥasan al-Qūnī (11th c.), Sicilian criptographer, philologist, poet, astronomer, and geometer.
See: MAA (109), MAMS (II 307); Amari [1] (596).

401. ABU'L-QASIM AL-BALKHI

Abū'l-Qāsim al-Balkhī (11th c.), from Balkh, astronomer.
A1. Introduction to the Science of Stars (al-Madkhal fī `ilm al-nujūm) - Istanbul (SM AS 2702).

402. IBRAHIM AL-ZARQALI

Abū Isḥāq Ibrāhīm ibn Yaḥyā al-Naqqāsh ibn al-Zarqāla al-Qurṭubī or al-Zarqālī al-Ṭulayṭalī (ca 1030-1099), born in Cordoba, worked in Toledo; engraver (al-naqqāsh), constructor of astronomical instruments, later became an astronomer. In medieval Europe he was known as "Arzachel" in the Latin sources and as "Arzaquiel" in the Spanish sources.
See: GAL (I 623), GAL^2 (I 862), GAS (V 52-53), IHS (I 758-759), KZ (III 407, 556, 569), MAA (109-111), MAA^2 (173), MAMS (II 308-309), SSM (50), TH (57); Baldi [1] (508-524), Boutelle [1], Calvo [6] (ENWC), Delambre [1] (175-179), F. Gökmen [3] (IA), Millas Vallicrosa [3, 8], R. Puig [4-5], Samsó [20-21], Samsó and Mielgo [1], Samsó and Millas [1], Steinschneider [6, 10], Tuqan [1] (348), Vernet [21] (DSB), [30].
Collection of Papers: "al-Zarqali" [1].
A1. Book of Operations by Means of Tympanum of Zijes (Kitāb al-`amal bi'l-ṣafīḥa al-zījiyya) = Treatise on the Astrolabe Zarqala, on the Construction of Tympanum Related to it, and Operations with it (al-Risāla al-zarqāliyya fī `amal al-ṣafīḥa mansūba ilayhi wa'l-`amal bihā) = Book on Operations by Means of [Astrolabe] Zarqala Applicable for All Horizons (Kitāb al-`amal bi'l-ṣafīḥa al-zarqāliyya al-mu`adda li jamī` al-āfāq) = Amsterdam (50/1), Brussels (50), Leiden (993/1, 1870/3), London (426/12) - under the first title, Istanbul (SM AS 2671/1) - under the second title, Escorial (II 962) - under the third title, Cairo (mīqāt 657), Istanbul (SM Esat 3804/3) - under the fourth title.
Edition of the foreword and Spanish translation: Alfonso X [1] (135-237). Medieval Latin translation published by Schöner: al-Zarqālī [1]. German translation of the foreword: Wiedemann and Mittelberger [1]

(199-202). Research: Braunmühl [3] (79-81), King [18], Millas Vallicrosa [3], Puig [6], Sarma [3], Steinschneider [11], Tagi-zade [4], Tagi-zade and Vahabov [1], Tibbon [1], Wittstein [4].
Book in 100 chapters. Description of the astrolabe "zarqāla" based on stereographical projection of celestial sphere from one of the points of equinoxes onto the plane through poles of universe and points of solstices. Unlike usual astrolabes each tympanum of which corresponds to a definite latitude (for definite horizon), this astrolabe is usable for all latitudes.
Treatise is dedicated to Mu`tamid ibn `Abbad (d. 1096) the Prince of Seville. Analogous "universal" astrolabe was described in treatise (No 269, A4) by al-Khujandī under the same name; perhaps this name was inserted by a later copyist, perhaps it first appeared in al-Khujandī's work.

A2. [Abridgement of the Treatise A1] - Cairo (huruf 40), Damascus (9541). Book in 61 chapters. Medieval Hebrew translation: Millas Vallicrosa [3]. Research: King [18].

A3. [Astrolabe] Shakkāziyya (al-Shakkāziyya) - Cairo (Taymūr riyāḍa 131/4), Istanbul (Univ. A4800). Edition by Puig: al-Zarqālī [2] (arab. 3-82). Spanish translation by Puig: al-Zarqālī [2] (83-177). Research by Puig: al-Zarqālī [2] (15-79, 179-209). Treatise in 60 chapters containing description of a modification of astrolabe "zarqāla".

A4. Book of Arrangement (Kitāb al-tadbīr) = Treatise on Motions of Planets and Their Arrangement (Risāla fī ḥarakāt al-kawākib al-sayyāra wa tadbīrihā) - Cairo (ḥurūf 124, mīqāt 920, Ṭal`at majlis 424/3), London (977/18, Add. 9599), Vienna (1421). Research: Cimino [2], Comes [2], Hartner [20], Toomer [2-3].

A5. Introduction to the Science of Stars (al-Madkhal ilā `ilm al-nujūm) - Istanbul (SM Fatih 3439/19).

A6. Toledan Zīj (al-Zīj al-Ṭulaytalī) - only the medieval Latin translations are extant entitled "Canones Arzachelis in Tabulas Toledanas and Canones Arzachelis sive reguli super tabulae astronomie". Research: SIAT (6-7); Boutelle [1], Comes [3], Curtze [6] (377-378), Delambre [2] (175-179), Goldstein [3], Hartner [20], Mercier [4], Steinschneider [6].

A7. [Revision of the] "Law" of Ammonius (al-Qānūn li 'Ūmāniyūs) - München (853) where Ammonius is called al-'Ūmātiyūs (Arabic letters (n) and (t) differ by only one dot); there are also medieval Latin and Spanish translations. Edition with Spanish translation: Millas Vallicrosa [3] (chapters 2-3). Research: SIAT (15-16); Boutelle [1].

A8. Book on the invalidity of the method used by Ptolemy to determine the position of Mercury's apogee (Maqāla fī ibṭāl al ṭarīq allati salakahā Bitlīmyūs fī istikhrāj al-bu'd al-ab'ad li-Utarid) mentioned by Ibn Bajja (No 436). Research: Samsó and Mielgo [1].

403. SA`ID AL-MUTATABBIB

Sa`īd ibn al-Ḥasan al-Mutaṭabbib (11th c.), physician (al-mutaṭabbib), and mathematician.
See: GAL2 (I 862), MAMS (II 309-310).

A1. Mathematical Stimulus in the Science of Astronomy (al-Tashwīq al-ta`līmī fī `ilm al-hay'a) - Istanbul (TK 3341/1). Description of the manuscript: SHIM (482-483). Treatise in 18 chapters: 1) introduction, 2) form of the Earth and its location in the universe, 3) geometric premises, 4) celestial spheres, 5) stars, 6-7) ecliptic and celestial equator, 8) climates, 9) day and night, 10) motion of stars and Lunar stations, 11) motion of the Sun, the Moon, and the planets, 12) conjunctions and aspects, 13) terrestrial measurements in miles. 14) volumes of planets and their distances from the Earth, 15) Lunar phases, 16) eclipses, 17) zodiacal signs, 18) conclusion.

404. ISMA`IL AL-QURTUBI

Abū'l-Walīd Ismā`īl ibn Aḥmad al-Qurṭubī (11th c.), from Cordoba, astronomer.
See: MAMS (III 20); Renaud [4].

A1. Treatise on Operations with the Tympanum "Zarqāla" (Risāla fī'l-`amal bi-wajh al-ṣafīḥa al-zarqāliyya) - Tunis (Sadiq. 2843).

405. `ABDALLAH IBN FIRRUH

Abū Muḥammad `Abdallāh ibn Fīrruh (11th c.), from Tortosa, knew inheritance and arithmetic well. ("Fīrruh" from Spanish "fierro" = "hierro" = iron).
See: KWA (I 423), KWA2 (II 501), MAA (111), MAA2 (173), MAMS (II 310); Ibn al-Abbār [1] (II 453).

406. HISHAM AL-WAQSHI

Abu'l-Walīd Hishām ibn Aḥmad ibn Khālid al-Kinānī al-Waqshī (1015-1096), born in Toledo, was a pupil in Salamanca, died in Denia; knowledgeable in philology, law, religion, inheritance, arithmetic, and geometry.
See: MAA (111), MAMS (II 310); Ibn Bashkuwāl [1] (II 592), al-Maqqarī [2] (II 232-233).

407. AHMAD IBN DIMJ

Abū Ja`far Aḥmad ibn Khamīs ibn `āmir ibn Dimj (11th c.), from Toledo, knowledgeable in geometry, astronomy, medicine, and philology, also a poet.
See: MAA (111), MAMS (II 310), UA (II 41); Tuqan [1] (345).

408. MUHAMMAD AL-FARID

Abū `Abdallāh Muḥammad ibn `Isā ibn Ma`yūn al-Zahrī al-Fāriḍ (11th c.), from Zahra, a suburb of Cordoba; arithmetician, knowledgeable in philology and inheritance.
See: MAA (111), MAMS (II 310); Ibn al-Abbār [1] (I 140).

409. ABU JA`FAR TABARI

Abū Ja`far Ṭabarī (10th c.), astronomer.
See: MAMS (II 211).
A1. Operations and Names in the Knowledge of the Astrolabe (al-`Amal wa'l-alqāb fī ma`rifat al-asṭurlāb) - Berlin (oct. 3386).

410. MUHAMMAD AL-HAZIMI AL-SA`IDI

Abū `Abdallāh Muḥammad ibn Aḥmad al-Ḥāzimī al-Sa`īdī (11th c.), astronomer.
See: MAA (202), MAMS (II 311).
A1. Abridgement of "Almagest" (Mukhtaṣar al-Majisṭī) - Mashhad (5837), Oxford (I 920), Tehran (Mahdawi 282).

411. ISḤAQ AL-SARDAFI

Abū Ya`qūb Isḥāq (or Aḥmad) ibn Yūsuf al-Ṣardafī al-Yamanī (d. ca 1105), from Yemen, mathematician.
See: GAL (I 620), GAL² (I 855), KZ (V 21-22), MAA (111), MAMS (II 311), MAY (53-54), SSM (131).
M1. Book on Indian Multiplication (Kitāb ḍarb al-hindī) = Abridged Book on Indian [Multiplication] (Kitāb mukhtaṣar al-hindī) = Abridged Book on Indian [Multiplication] (al-Kitāb al-kāfī fī mukhtaṣar al-hindī) - Berlin (5960-5961, 5961a-b), Cairo (majlis 703/4, 704/2, riyad. 84/1), Manchester (Lind. 460), Milan (D 371/2, F 191), Princeton (Yehuda 334), Rome (Vat. 1115, 1139). Research: Rebstock [4].
M2. Sufficient [Book] on Inheritance (al-Kāfī fi'l-farāiḍ) - Berlin (4688), Milan (H 93/2, Griffini 38/2), see KZ.
M3. Sufficient [Book] for him who goes by the Right Path and Answer of the Leading (Kifāyat al-muhtadī wa ijābat al-mahdī) - Milan (D 550).

412. MUHAMMAD IBN SALM

Abū `Abdallāh Muḥammad ibn `Abdallāh ibn `Abd al-Raḥmān ibn Salm (11th c.), Yemeni mathematician.
See: GAL² (II 855), MAY (56).
M1. [Commentary on the Arithmetic Treatise of al-Sardafī] - Milan (D 550). Commentary on the work (No 411, M1) al-Ṣardafī.

413. `ABDALLAH AL-ALSHI

Abū Muḥammad `Abdallāh ibn al-Faqīh al-Alshī (11th c.), from Elche. Andalucia, worked in Granada; arithmetician and knowledgeable in inheritance.
See: MAA (111-112), MAMS (II 311); Ibn al-Abbār [1] (II 464).

414. AL-HASAN AL-SAFAQISI

Abū `Alī al-Ḥasan ibn `Abd al-A`lā al-Kalā`ī al-Safāqisī (d. 1111), from Sfax, Tunisia, worked in various cities of Spain and in Ceuta; he knew law, arithmetic, and geometry well.
See: MAA (112), MAMS (II 311-312); Ibn al-Abbār [1] (I 25).

415. MUHAMMAD AL-GHAZZALI

Abū Ḥāmid Muḥammad ibn Muḥammad ibn Muḥammad al-Tūsī al-Shāfi`ī al-Ghazzālī (1058-1111), Muslim philosopher from Tus, Khurasan; opposed Greek philosophy, one of the founders of Sufism, introduced the first heretic doctrine into the course of orthodox Islam.

See: GAL (I 535-546), GAL² (I 744-756), IHS (I 753-754), KWA (I 463), KWA² (II 621), KZ (I 6, 159, 170, 180, 182, 202, 243, 266, 280-282, 320, 376, 401, 438, 445, 489, 518, II 24, 27, 53, 177, 217, 254, 297, 307, 323, 372, 466, 476, 631, 635, 642, 645-647, III 74, 80, 127, 167, 170, 180, 195-197, 207, 223, 330, 334-336, 352, 367, 390, 418, 426, 436, 441, 596, IV 54, 107, 270, 275, 301-302, 305, 319, 340, 343, 364, 446, 459, 466, 482, 496, 510, 514, 575, 584, V 66, 73, 129, 255, 285, 351, 361, 408, 417, 426, 461, 469, 474, 489, 492, 505, 513-514, 523-527, 557-559, 576, 587, 590, 609, 621, 631, 641, VI 40, 89-90, 162, 184, 199, 203, 210-211, 285, 352, 402, 427, 437, 508, 516), MAA (112), MAMS (II 312-313), PI (IV 156-182); Abu'l-Fida [1] (III 175), Asin Palasios [2, 4, 7], Browne [3] (II 293-296), Bouyges [1], de Boer [2] (138-150), Carra de Vaux [11], Farmer [4] (40), Gardner [1], Gosche [1], S. Grigorian [4] (FE), Hana [3] (GWG), Hourani [1], Humai [1], Jabre [1-2], Kerimov [1], Kufrali [1] (IA), Ley [2] (104-117), [3] (129-143), Macdonald [1], Macdonald and Menzel [1] (EI), Montgomery-Watt [1-2, 4], Naumkin [1], Obermann [1], Quadri [2] (122-153), Radev [1] (132-164), al-Rifa`i [1], A. Sa`di [1], Schmölders [1], M. Smith [1], Ueberweg [1] 310-312), Ülken [4] (322-389), Wensinck [5], Zwener [1].

A1. Concise Exposition of Astronomy (Talkhīṣ al-hay'a). Manuscript was known to be in Paris (1217) but was lost.

A2. On Motion and Nature of Planets (Fī ḥarakat wa ṭabī`at al-kawākib) - Escorial (937).

A3. Concise [Book] about the Composition of Letters Called Magic, their Order in Heaven, in Celestial Spheres, in [Celestial] Kingdoms and in Zodiacal Signs (Mukhtaṣar fī tarkīb al-ḥurūf al-ma`rūf bi'l-sīmiyā wa tartībihā `alā'l-asmā' wa'l-aflāk wa'l-amlāk wa'l-burūj) - Milan (75/15).

PH1. Book of Refutation of Philosophers (Kitāb tahāfut al-falāsifa). Editions: al-Ghazzālī [5, 9]. Latin translation by Gonzales: al-Ghazzālī [1]. English translation by Kamālī: al-Ghazzālī [11]. Russian translation of chapters on mathematics: Zubov [1] (411-426). Research: Kiladze [1-2]. Research: Abu Rida [1], de Boer [1], Kerimov [1], S. Van den Bergh [3]. Critique of Greek philosophy and philosophy of al-Fārābī (No 180) and Ibn Sīnā (No 317), contains mathematical chapters on fundamental notions of geometry, on indivisibles and infinity.

PH2. Answers of al-Ghazzālī (al-Ajwiba al-Ghazzāliyya). Russian translation by Rubin from a medieval Hebrew translation: S. Grigorian [3] (196-211). Certain philosophical and theological problems.

PH3. Protector from Error of ways and Explainer of Existence (al-Munqidh min al-ḍalāl wa'l-mufṣiḥ an al-ahwal). Edition: Al-Ghazzālī [10]. French translation by Barbier de Meynard: al-Ghazzālī [2], Russian translation by Saghadeyev: S. Grigorian [3] (211-266). Research: Frick [1]. Treatise contains the autography of al-Ghazzalī. It describes the sciences he studied in his youth as well as Sufi teaching which he later adopted. Description of mathematics: S. Grigorian [3] (223-225), natural sciences: (226-227), magic squares: (262).

PH4. Aims of Philosophers (Maqāṣid al-falāsifa). Editions: al-Ghazzālī [3, 7]. English translation of fragments containing critique of medieval atomistic ideas on space: Grant [2] (314-318). Russian translation of the same fragments: Zubov [1] (411-426).

PH5. Theological Treatises: a) Resurrection of the Sciences of Faith (Iḥyā' `ulūm al-dīn). Editions: al-Gazzali [8, 12a], Russian translation by Naumkin: al-Ghazzālī [14]. b) The Alchemy of Fortune (Kīmiyā al-sa`āda). Edition: al-Ghazzālī [4], English translation: Homes [1]. c) Book of Right Balance (Kitāb al-qusṭās al-mustaqīm) - ethical treatise. French translation: Chelhot [1], Russian translation by Naumkin: al-Ghazzālī [15]. Research of (a): Asin Palasios [5], Bousquet [1], research by Naumkin of (a) and (c) - in books al-Ghazzālī [10-11] and Naumkin [1].

416. MUHAMMAD AL- SHARIFI

Abū Ja`far Muḥammad ibn `Abdallāh al-Sharīfī (11th c.), astronomer and astrologer.
See: SSM (147), TIFI (119).

A1. Crown of Introductions (Tāj al-madākhil) - Cairo (Ṭal'at mīqāt 233/1). Princeton (Yehuda 367). Astrological treatise in 3 books of 18 chapters each, compiled in 1095 for Seljuk Amīr Tāj al-Dīn. The work contains spherical astronomical tables for latitudes of Marw and Tirmidh.

417. HASDAY IBN HASDAY

Abū'l-Faḍl Ḥasdāy ibn Yūsuf ibn Ḥasdāy (11th c.), a Jew from Zaragoza; philosopher, physician and poet, also he had knowledge of philology, mathematics, and astronomy.
See: MAA (112), MAMS (II 313), UA (II 50).

418. AL-HUSAYN AL-SHAKKAK

Abū 'Abdallāh al-Ḥusayn ibn Aḥmad ibn 'Alī al-Shakkāk al-Baghdādī (d. 1117), from Baghdad, mathematician.
See: GAS (V 328), MAMS (II 314).
M1. Commentary on "The Sufficient on Arithmetic" (Sharḥ al-Kāfī fi'l-ḥisāb) - Istanbul (TK 3155/2). Description of the manuscript: SHIM (516). Commentary on the work (No 309, M1) of al-Karajī.

419. TAWFIQ IBN AL-HUSAYN

Abū Muḥammad Tawfīq ibn Muḥammad ibn al-Ḥusayn (d. 1122), born in Spain or Maghrib, worked and died in Damascus, geometer, astrologer, and philologist.
See: MAA (112), MAMS (II 314), TH [1].

420. 'UMAR KHAYYAM

Ghiyāth al-Dīn Abū'l-Fatḥ 'Umar ibn Ibrāhīm al-Khayyāmī (Khayyām) al-Naysābūrī (Nīshāpūrī) (1048-1131) was born in Nishapur to a family of artisans (al-khayyām = tent master); he was a pupil in Balkh, worked in Samarkand (Bukhara); in 1074 he was invited to the capital city of Isfahan by Seljuk Sultan Jalāl al-Dawla Malik-shah (1072-1092) to organize an astronomical observatory and reform the Iranian Solar calendar. This reform was made in 1079 and the new calendar, with 8 leap years for 33 years, was called "Maliki era" or "Jalālī era" according to the names of the sultan. The observatory was closed in 1092. He also worked under subsequent Seljuk sultans, in particular under Sanjar (1118-1157) in Marw. He died in Nishapur. Khayyām was a mathematician, an astronomer, and a great Persian poet as well as the author of philosophical quatrains (rubā'ī).

See: GAL (I 620-621), GAL² (I 855-856), GAS (V 49-52), IHS (I 759-761), KZ (II 584, III 570, VI 273), MA (76, 84-89, 94-102, 117-122), MAA (112-113), MAMS (II 314-319), SSM (147), TH (243-244); Abū'l-Fida [1] (III 239), Ahadova [8], Amir Moez [6], Archibald [1], Ateş [6], Bayhaqi [5] (75-77), Berggren [10] (12-15, 118-124), Boyle [1], Browne [3] (II 246-258), Chavushi [2,6], Christensen [1], Dilgan [5], Dorofeyeva [1], A. Fadil [1], Fouchecour and Rosenfeld [1], F. Gabrieli [1] (SeT), Humai [3], 'A. Iqbal [1], Jacob and Wiedemann [1], Kapp [1] (II 79-80), Mieli [2] (111-114), Minorsky [1] (EI), [4] (IA), Mitra [1], Morochnik [1], Morochnik and Rosenfeld [1], Morochnik and Rosenfeld [2] (FE), Mustawfi [1], S. Nadwi [1], Naficy [1], W. Rizvi [1], Rosenfeld [4], [57] (ENWC), Rosenfeld and Yushkevich [5, 7], Ross and Gibb [1], Salat [1], al-Sarraf [1], Sayılı [18] (160-166), Shamsiddinov [1-2], Shamuhamedov [1], Shirozi [1], Story [1], Struik [1], Swami Govinda [1], Tuqan [1] (359-365), Van der Waerden [3] (24-33), Yushkevich [1], Yushkevich and Rosenfeld [6] (DSB), Zhukovskiy [1-2].

Collection of Papers: "al-Khayyām" [1].

M1. Treatise on the Subdivision of the Quadrant of a Circle (Risāla fī taqsīm rub' al-dā'ira) - Tehran (Univ. 1751/2). Facsimile edition of the manuscript and Persian translation: Musahib [2] (59-74, 251-291). Edition with French translation and research: Rashed and Djebbar [1] (73-91, 171-181, Arab. 80-99).) English translation: Amir Moèz [3]. Russian translation by Krasnova and Rosenfeld: Khayyām [26]. Classification of cubic equation, solution of the equation $x^3+200x=20x^2+2000$ by intersection of a circle and an equilateral hyperbola and approximate numeric solution of this equation.

M2. Treatise on Proofs of Problems of Algebra and Almucabala (Risāla fi'l-barāhīn 'alā masā'il al-jabr wa'l-muqābala) - Cairo (riyāḍa 898/3), Leiden (14/2), London (Ind. 734/10), Paris (2458/7, 2461), Rome (Barb. 96/2). Edition of the Paris and London manuscripts with French translation by Woepcke: Khayyām [1]. Edition of the same manuscripts with Persian translation: Musahib [2] (159-294), other Persian translation: Musahib [1]. Edition with French translation and research: Rashed and Djebbar [1] (11-72, 95-170, Arab. 1-

78). Photo-reproduction of the first Paris manuscript with Russian translation by Rosenfeld: Khayyām [25] (69-112, arab. 7-33), Russian translation of the Leiden manuscript by Rosenfeld: Khayyām [18] (15-67). English translations: by Kasir - Khayyām [7], by Winter and `Arafat - Khayyām [16]. Research: Yardley [1]. Research: Amir Moèz [4, 5], Eves [1], Hussein, Mohammed Akram, and Sabir [1], Musahib [1-2], by Rosenfeld and Yushkevich: Khayyām [25] (239-270), Winter and `Arafat [3] (45-79), Woepcke [1], Yushkevich [1].

Treatise on the solution of cubic equations. Classification of linear, quadratic, and cubic equations with positive coefficients and solution of each type of cubic equations by intersection of a circle, a parabola, and equilateral hyperbolas. Investigation of the possibility of positive roots and their multipleness. Treatise was written after M1 in Samarkand and has an appendix written after 5 years - on an error of Abu'l-Jūd (No 342).

M3. Commentary on Difficulties in Introductions to the Book of Euclid (Sharḥ mā ashkala min muṣadarāt kitāb Uqlīdis) - Hyderabad (Salar riyāḍa 23), Leiden (199/8), Paris (4946/4). Edition of the Leiden manuscript by Erani: Khayyām [10]. Edition of both manuscripts by Sabra: Khayyām [24]. Edition by Humai: Humai [3]. Photo-reproduction of the Leiden manuscript with Russian translation by Rosenfeld: Khayyām [25] (113-145, Arab. 35-57). English translation by Amir Moèz (incomplete): Khayyām [21]. French translation of chapter on parallel lines: Jaouiche [4] (185-199), research of this chapter: Jaouiche [4] (75-98), Pont [1] (172-177), Rosenfeld [27] (63-69), [51] (262-263), Rosenfeld and Yushkevich [10] (66-73). Research: Amir Moèz [5], Franklin [1], Jaouiche [4] (75-98), Kramar [1], Rosenfeld and Yushkevich [8], D. Smith [1], Vahabzadeh [2]

Treatise in 3 books plus introdution containing the critique of the application by Euclid and Ibn al-Haytham (No 328, M2) of motion in geometry. Books: 1) parallel lines: 5 "principles of Philosopher" (Aristotle), the fourth (from a non-extant work of Aristotle) is equivalent to Euclid's 5th postulate, proof of this postulate as based on this principle. Khayyām considers a quadrangle with two equal lateral sides, two right lower angles and two equal upper ones (the Saccheri quadrangle) and three hypotheses on its upper angles, as acute, obtuse, or right, and refutes the first two hypotheses by means of the "principle of Philosopher", hence he obtains the assertion of the 5th postulate. When the consequences from first two hypotheses are considered, essentially first theorems of hyperbolic and elliptic non-Euclidean geometries are considered. 2) theory of ratios: critique of the theory of ratios in the Book V of Euclid's "Elements" (built by Eudoxus) and proposition to replace it by a new theory based on Euclid algorithm (coinciding with ancient theory built by Thaethetus). 3) theory of composed ratios. Proposition to relate with any ratio of continuous quantities a new "number", such that this number for composed ratio is equal to products for numbers for ratios of the composed ratio; these new numbers coincide with modern real numbers.

M4. Problems of Arithmetic (Mushkilāt al-ḥisāb) - is mentioned in the treatise M2 and in contents of the collection of manuscripts Leiden 199, In M2 Khayyām calls this treatise "a treatise on the proof of Indian methods of extraction of square and cube roots and the extension of these methods for bases of "quadrato-square", "quadrato-cube", "cubo-cube" and so on". Since these operations in works of later mathematicians, for instance (No 606, M17) of al-Tusi, were connected with the formula of "Newton binomial" $(a+b)^n$, this formula also appeared in this treatise. The anonymous treatise "Problems of the Science of Arithmetics" (Mushkilāt fī `ilm al-ḥisāb, Baku B 5545/14) probably is a fragment of this treatise.

A1. Book on New Year (Nawrūz-nāma) P - Berlin (2450), London (Sup. 23568 - incomplete). Edition by Minuwi of the Berlin manuscrpt: Khayyām [7], edition by `Abbas: Khayyām [22] (303-391). Facsimile edition of the Berlin manuscript and Russian translation by Rosenfeld: Khayyām [25] (187-224). Research: Massé [2], Rosenfeld and Yushkevich: Khayyām [25] (317-329). Treatise on calendars and especially on calendar reforms on Iranian Solar calendar and on New Year feast ceremonies in pre-Islamic Iran. Undoubtly this treatise was written after the destruction of Khayyām's astronomical observatory in Isfahan and its aim was to draw the attention to calendar reforms and to prompt the rulers to restore this observatory.

A2. Zīj of Malik-shah (al-Zīj Malik-shāhī) - is mentioned in KZ (III 570). Facsimile edition and Russian translation of the star catalogue of this Zīj from anonymous manuscript Paris 5968 by Rosenfeld: Khayyām [25] (225-235, Arab. 167-169), al-Bīrūnī [18] (159-173). Research: Rosenfeld: al-Bīrūnī [18] (186-190), Rosenfeld and Yushkevich: Khayyām [25] (330-333).

Me1. Balance of Wisdoms (Mīzān al-ḥikam) = On the Art of Defining Quantities of Gold and Silver in a Body Consisting of Both (Fī ikhtiyāl ma`rifat miqdāray al-dhahab wa'l-fiḍḍa fī jism murakkab minhumā) - Gotha (1158) - under the second title, is included in the "Book on Balance of Wisdom" (No 476, Me1) by al-Khāzinī [1] (87-92) as chapter 5 of the Book IV. The first title was mentioned by historian Ahmad Nasrallah Tatawi in "History of Thousand [Years]" (Ta'rīkh alfī), the history of the first 1000 years of Islam written in 998 H / 1589 (see Zhukovsky [1], 338). Edition: Nadwi [1] (427-432). Photo-reproduction of the treatise according the

St. Petersburg manuscript of the work (No 476, Me1) by al-Khāzinī and Russian translation by Rosenfeld: Khayyām [25] (147-151, Arab. 14-17), his other Russian translation: Khayyām [18] (108-112). English translation: Khanykov [1]. German translation: Wiedemann [32] (113-117). Facsimile edition of the Gotha manuscript: Khayyām [10], edition of this manuscript: Khayyām [5] (202-204), Khayyām [22] (429-433), German translations: Wiedemann [25] (170-173), F. Rosen [1]. Russian translation by Rozhanskaya and Levinova: al-Khāzinī [2] (82-84). Research: Levinova [1], Rosenfeld and Yushkevich: Khayyām [25] (298-301), Rozhanskaya [8] (111-113). Determining the quantities of gold and silver in an alloy by weighing in the air and water.

Me2. On Right Balance (Fī'l-qusṭās al-mustaqīm) - is included in the "Book on Balance of Wisdom" (No 476, Me1) by al-Khāzinī [1] (151-153) as chapter 8 of the Book VII. Russian translation by Levinova: Khayyām [30]. Russian translation by Rozhanskaya and Levinova: al-Khāzinī [2] (129-130). Research: Levinova [1], Rozhanskaya [8] (120). Treatise on scale balance with a movable weight.

Ph1. Concise [Treatise] on Nature (Mukhtaṣar fī'l-ṭabī`iyāt) - is mentioned by Swami Govinda Tirtha [1] (32-33) with reference to the book (No 471, HS1) of al-Bayhaqī.

Mu1. Reasoning on Kinds [Formed] by Quart (al-Qawl `alā'l-ajnās allatī bi'l-arba`) - Manisa (1705/5), Tehran (Univ. 509). Edition, Persian translation, and research: Hushyar and Baqiri [1]. Facsimile edition of the Tehran manuscript: Humai [3] (341-344). Russian translation by Rosenfeld and Khayretdinova: Khayyām [31].

Mu2. Commentary on Difficulties from the "Book on Music" (Sharḥ al-mushkil min Kitāb al-mūsīqā) - is mentioned in M3.

G1. Necessary on Places (Lawāzim al-amkina) - is mentioned by Swami Govinda Tirtha [1] (337-338) with reference on "History of Thousand [Years]" of Tatawi.

PH1. Philosophical Treatises: a) Treatise on Being and Existence (Risāla al-kawn wa'l-taklīf), b) Answer to three questions: Necessity of Contradiction in the World, Determinism, and Longevity (Jawāb `an thalāth masā'il: ḍarūrat al-taḍādd fī'l-`ālam wa'l-jabr wa'l-baqā', c) Light of Reason on the Object of the Universal Science (al-ḍiya' al-`aqlī fī mawḍū ` al-`ilm al-kullī), d) Treatise on Existence (Risāla fī'l-wujūd), e) Treatise on the Universality of Existence (Risāla fī kulliyāt al-wujūd) = Book by Demand (Darkhwāst-nāma) = Treatise on the Chain of Order (Risāla-yi silsila al-tartīb) P.

al-Nasawi, the judge and imam of the province of Fars, asked him to write some of these treatises to defend himself from heresy. It is possible that al-Nasawi, one of Ibn Sīnā's (No 317) pupils of philosophy, wanted to defend Khayyam against these accusations.

Edition with Russian translations by Rosenfeld: Khayyām [25] (152-186), same translations: Morochnik and Rosenfeld [1] (163-208), Khayyām [32]. Other editions: Ibn Sīnā, Khayyām and others [1] (165-193) (a-c) Nadwi [1] (373-425) (a-e), Rosenfeld and Yushkevich [5] (140-141) (e), Svami Govinda [1] (67-78, 83-129) (a-b, d-e). French translation of (e): Christensen [1]. Research: Christensen [1], by Rosenfeld and Yushkevich: Khayyām [25] (302-316), Yushkevich [1].

L1. Quatrains (Rubā`iyyāt) P. Editions: by Nicolas - Khayyām [3] (464 quatrains), with French translation, by Whinfield - Khayyām [4] (500) with English translation, by Heron-Allen - Khayyām [4a] (158), by Christensen [1] (55-132), by F. Rosen - Khayyām [5] (330), by Svami Govinda [1] (1-30, Pers. 129-132) (1069), by Arberry - Khayyām [15] (172) with English translation, by Bolotnikov - Khayyām [9] (50) with Russian translations by Aliyev and Osmanov - Khayyām [23] (290) with Russian translation, by Furughi - Khayyām [13], by `Abbas - Khayyām [22] (252). Tajiki editions: by Mullokand - Khayyām [11] (326), by Mirzoyev - Khayyām [20] (200). English translations by Fitzgerald: Khayyām [2], by Graves and Ali-Shah: Khayyām [28]. Russian translations: by Tkhorzhevskiy - Khayyām [6] (70), [33] (194), by Nekora - Khayyām [9a] (144), by O. Rumer - Khayyām [12] (300), edited by Morochnik - Khayyām [14] (120, 189), edited by Osmanov - Khayyām [19] (268), by Derzhavin: Khayyām [27] (488), by Plisetskiy: Khayyām [29] (450); Khayyām [34] (381). Research: Aliyev and Osmanov [1], Christensen [2], Rosenfeld and Yushkevich [7] (144-161). Qasumov [1], Ross in the edition of Khayyām [2] of 1900, Yushkevich [1]. Research of atomism in Khayyām's quatrains: Mazahéri [1].

421. MUHAMMAD IBN `ABD AL-BAQI AL-BAGHDADI

Abu Bakr Muḥammad ibn `Abd al-Bāqī al-Baghdādī (or al-Mawṣilī) al-Faraḍī (1050-1141), was known by the names "Qāḍī al-Māristān" and "Abū Bakr al-Māristānī" (qāḍī= judge, māristān = hospital for mental disturbances), from Baghdad or Mosul; jurist mathematician, astronomer, and knowledgeable in inheritance.

See: GAL² (I 854-855, 857, II 1023), GAS (V 386-387, VII 413), IHS (I 761-762), KZ (I 382, II 120, 432, V 563), MAA (202), MAA² (181), MAMS (II 319-321); Kapp [1] (III 66-67), Schützinger [1].

M1. [Commentary on Book X of Euclid's "Elements"] - Rampur (3058). There are manuscripts of medieval Latin translations under various titles in Cambridge, Kraków, and Paris: The Cambridge manuscript is titled "On Numbers and Lines" (De numeris et lineis), in the medieval collection of translations by Gherard of Cremona (Boncom-pagni [1]) - Book of Jew (Judge?) on Tenth [Book] of Euclid" (Liber judei (judici?) super decimum Euclidis); in the Paris manuscripts, the author is called "Abbacus". Editions of Latin translations: by Boncompagni - al-Baghdadi [1] according to the Cambridge manuscript, by Curtze - al-Nayrīzī [1] (252-386) according to the Krakow manuscript (Curtze regarded this treatise as the continuation of al-Nayrīzī's commentary on Euclid's Book X). Partial Russian translation: Matviyevskaya [16] (74-76). Research: GAS (VII 401). Björnbo [1, 2] first found the coincidence of the texts of Paris and Krakow manuscripts and doubted the authorship of al-Nayrīzī. Suter [16] established that "Abbacus" (Abdbacus) is a Latin form of the name "ʿAbd al-Bāqī" and in [49] corrected errors in editions of Boncompagni and Curtze; Matviyevskaya [7] (97-100), [16] (70-74, 76-78). In this treatise the term "rational number" and "deaf number" (for irrational numbers) are introduced.

M2. Treatise for Muhadhdhab al-Dīn on Mental Reckoning (al-Risāla al-Muhadhdhabiyya fi'l-ḥisāb al-hawāʾī) - Istanbul (AS 2738). Here the author is called Abū Bakr Muḥammad ibn al-Bāqī al-Mawṣilī.

M3. Detailed Tables of Sines for Each Minute (Jadāwil al-jayb al-maḥlūl daqīqa daqīqa) - Cairo (V 280/1).

M4. Treatise on Approximation of Principles of Arithmetic in Algebra and Almucabala (Risāla fī taqrīb uṣūl al-ḥisāb fi'l-jabr wa'l-muqābala) - Damascus (6000).

M5. Book of Measurement (Kitāb al-misāḥa) = Book of Classes on Explanation of Measurement (Kitāb al-ṭabaqāt fī sharḥ al-misāḥa) - Istanbul (SM Fatih 3439/17 - under the second title), St. Petersburg (Nat. Firk. 143 - under the first title). Description of the Istanbul manuscript: SHIM (515). Edition of the medieval Latin translation by Gherard of Cremona: al-Baghdādī [2]. Research: Busard [1] (the translation by Gherard of Cremona), Hogendijk [21], Suter [14]. Treatise in four chapters.

422. IBN AL-WAQSHI AL-TULAYTALI

Ibn al-Waqshī al-Ṭulayṭalī (11-12th c.) from Toledo, perhaps son of al-Waqshī (No 406); geometer and astronomer, also knew logic well.

See: MAA (113-114), MAMS (II 321); al-Maqqarī [2] (II 232).

423. AL-MUZAFFAR AL-ASFIZARI

Abū Ḥātim al-Muẓaffar ibn Ismāʿīl al-Asfizārī (12th c.), son of Abū'l-Muẓaffar Ismāʿīl al-Asfizārī who worked with Khayyām in the observatory at the court of Seljuk sultan Malik-shah; also pupil of Khayyām (No 420).

See: GAL² (I 856), IHS (II 204), MAA (114), MAMS (II 321-322), PL (II 495-497), SSM (147); al-Bayhaqī [5] (78), Pingree [61] (EIr), Tuqan [1] (356).

M1. Introduction to Measurement (Muqaddima fi'l-misāḥa) - Istanbul (SM Laleli 2708/3).

M2. Short Treatise on "Elements" of Euclid (Ikhtiṣār fī Uṣūl Uqlīdis) - Paris (2458/4). Partial French translation: Sedillot [3] (146-148). Commentary on Book XIV of "Elements" written by Hypsicles.

Me1. [Revision of] Book of Mechanics (Kitāb al-ḥiyal) - Manchester (347/B). Revision of the work (No 74, Me1) of Banū Mūsā.

Me2. Guide for those who are Knowledgeable in the Art of Balance (Irshād dhawī al-ʿirfān ilā ṣināʿat al-qabbān) - Cairo (riyāḍa 1021), Damascus (4460). Description of the Cairo manuscript: Sayyid [1] (6-7). Treatise on level balance.

Me3. Centers of Gravity and Construction of Balance (Fī marākiz al-athqāl wa ṣanʿat al-qabbān) - is included in the work (No 476, Me1) of al-Khāzinī [1] (38-54) as chapter 2 of the Book II. German translation: Wiedemann [34] (136-158). Russian translation by Rozhanskaya and Levinova: al-Khāzinī [2] (41-51). Research: Levinova [1], Levinova and Rozhanskaya [2], Rozhanskaya [8] (120-121). Treatise on level balance in 4 chapters: 1) centers of gravity, 2) conditions of horizontality of the beam of balance, 3) graduation of balance and weighing by it, 4) transformation of graduation.

Me4. On Making of Parts of Balance of Wisdom (Fī ṣanʿat aʿḍāʾ mīzān al-ḥikma) - is included in the work (No 476, Me1) of al-Khāzinī [1] (93-102) as chapter 1 of the Book V. Russian translation by Rozhanskaya and Levinova: al-Khāzinī [2] (85-93). Research: Levinova [1], Rozhanskaya [8] (121-122).

424. `AYN AL-ZAMAN AL-MARWAZI

Abū `Alī al-Ḥasan ibn Aḥmad ibn Muḥammad al-Qaṭṭān al-Marwazī (b. 1073) born in Marw, known by the name "`Ayn al-Zamān" (Eye of the Time); astronomer.

See: MAMS (II 322).

A1. Knowledge of the Universe (Kayhān-shinākht) P - Tehran (202, Univ. Adab. 231).

425. AS`AD AL-BAYHAQI

As`ad ibn Aḥmad al-Bayhaqī (11-12th c.) from Bayhaq near Marw, mathematician.

See: MAMS (II 322).

M1. Hindu Reckoning (Ḥisāb al-Hind) - Tashkent (6131/6).

M1a. Book of Arithmetic (Maqālat al-ḥisāb) - Mashhad (6042).

M2. Sufficient Book (al-Kitāb al-mughnī) - Moscow (Andronov), Tashkent (SADUM 1632/2). Description of the Moscow manuscript: Andronov and Sobirov [1] (9-10). 2 parts: 1) Arithmetic of integers (Extraction of quadratic and cubic roots), 2) Arithmetic of fractions.

M3. Book of Measurement (Kitāb al-misāḥa) - Moscow (Andronov). Description of the manuscript: Andronov and Sobirov [1] (10). Treatise on measuring areas of plane figures and volumes of solids.

426. AHMAD AL-FARABI

Aḥmad ibn `Umar ibn Yūsuf al-Fārābī (11-12th c.) from Farab, which is situated at the junction of Arys and Syrdarya.

See: MAMS (II 323).

M1. Book on Pecularities in the Construction of Circular Ponds (Kitāb tadbīr al-khawāṣṣ fī tadwīr al-aḥwāḍ) - Moscow (Andronov). Research: Nursultanov [1]. Treatise on the measurement of a circle and its application to the construction of circular ponds.

427. MUHAMMAD AL-MA'MURI AL-BAYHAQI

Muḥammad ibn Aḥmad al-Ma'mūrī al-Bayhaqī (d. 1092), from Bayhaq near Marw, mathematician and mechanician.

See: MAMS (II 323); Tuqan [1] (368). Zirikli [1] (II 208)

M1. Book on Subtleties of Conic Sections (Kitāb fī daqā'iq al-makhrūṭāt) is mentioned by Zirikli [1].

Me1. On Mechanics and Loads (Fī'l-ḥiyal wa'l-athqāl) - is mentioned by Zirikli [1].

428. ABU'L-ASBAGH `ABD AL-`AZIZ

Abū'l-Aṣbagh `Abd al-`Azīz ibn `Alī ibn `Abd al-`Azīz (d. 1129) from Tortosa, died in Granada; physician and arithmetician; knowledgeable in law, literature and inheritance.

See: MAA (114), MAMS (II 323); Ibn al-Abbār [1] (II 624).

429. `ALI AL-ADIB

Abū'l-Ḥasan `Alī ibn al-Naṣīr al-Adīb (11-12th c.), judge in Higher Egypt; knew literature (al-adīb) well, also an astrologer.

See: HD (377), HD^2 (248), MAA (114), MAMS (II 323).

430. RIZQALLAH AL-NAHHAS

Rizqallāh al-Naḥḥās (12th c.), Egyptian astrologer, came from a family of coppersmiths (al-naḥḥās = coppersmith); he had many pupils.

See: HD (376), HD^2 (247), MAA (114-115), MAMS (II 323); TH (186-187).

431. UMAYYA ABU'L-SALT AL-ANDALUSI

Abū'l-Ṣalt Umayya (or Amīr) ibn `Abd al-`Azīz ibn Abī'l-Ṣalt al-Andalusī (1068-1134), born in Denia (Spain), worked in Seville, Cairo, and Mehdia (Tunisia), died in Mahdia; mathematician, astronomer, historian, poet, and musician.

See: GAL (I 641), GAL² (889), HD (375), HMA (II 74-75), IHS (II 230), KZ ((I 228, 446, II 148, 396, III 41, 255, 263, 365, 442, IV 146, V 172, VI 430), MAA (115), MAA² (173), MAMS (II 324-325), SSM (59), TH (80-81); Farmer [4] (41), Tuqan [1] (337-339).

M1. [On various meanings of the word "nuqṭa"] - Leiden (556/5) (usually the word nuqṭa is translated as "point").

M2. Book of Geometry (Kitāb al-handasa) - is mentioned by in KZ (V 172) and TH.

M3. Concise [Book] on Geometry (Wajīz fī'l-handasa) - is mentioned in KZ (VI 430)

A1. Treatise on Operations with the Astrolabe (Risāla fī'l-`amal bi'l-asṭurlāb) - Beirut (197), Berlin (5798, IGMN I 16), Cairo (mīqāt 773, 916 - a fragment, falak 4000, Taymūr ghayb. 197/12 - a fragment), Damascus (3090), Florence (128/2), Istanbul (SM Esat 2021, Laleli 2726/4), Leiden (556/2), London (5479, 9599 - a fragment), Milan (279c), Mosul (259/1), Oxford (I 967/10), Paris (5172/3, 6441, Hebr. 1101 - by Hebrew letters), St. Petersburg (Nat. 128/2), Tashkent (465/1), see KZ (III 365). Treatise in 90 chapters. The Cairo Taymur fragment bears the marginal notes of the author written in an Egyptian prison.

A2. [Construction of the Universal Tympanum on Which Seven Planets Are Established] - Beirut (Greek 364/17). Research: Kennedy [28].

PH1. Book on Correction of the Mind (Kitāb taqwīm al-dhihn). Edition with Spanish translation by Palencia: Abu'l-Salt [1].

Mu1. Treatise on Music (Risāla fī'l-mūsīqā) - is mentioned in KZ.

432. ABU MUHAMMAD `ABD AL-KARIM

Abū Muḥammad `Abd al-Karīm (11-12th c.), Sicilian astronomer, worked in Cairo.

See: MAA (115-116), MAMS (II 325); Amari [1] (669).

433. MUHAMMAD AL-TUJIBI

Abū `Abdallāh Muḥammad ibn Aḥmad ibn Ghālib ibn Khalaf al-Tujībī al-Baqqassānī (d. 1136), from Valencia; physician and arithmetician, knew inheritance well.

See: MAA (116), MAMS (II 325); Ibn al-Abbār [1] (I 164).

434. HANUN AL-YA`MARI

Abū'l-Ḥasan Ḥanūn ibn Ibrāhīm ibn Isḥāq al-Ya`marī (d. ca 1135), from Jaen; literary man and arithmetician, knew inheritance well.

See: MAA (116), MAMS (II 325); Ibn al-Abbār [1] (I 36).

M1. Book on Deals (Kitāb fī mu`āmalāt) - is mentioned by Ibn al-Abbār [1].

435. MUHAMMAD AL-KHARAQI

Bahā' al-Dīn (or Shams al-Dīn) Abū Bakr Muḥammad ibn Aḥmad ibn Abī Bishr al-Ḥusaynī al-Kharaqī (d. 1139), born in Kharaq near Marw; worked in Marw, mathematician.

See: AGL (311-313), GAL (I 624), GAL² (I 863), IHS (204-205), KZ (II 180, V 63, VI 170), MAA (116), MAA² (173-174), MAMS (II 325-326); al-Bayhaqī [1] (192), Tuqan [1] (366-367), Wiedemann [190], Wiedemann and Kohl [1].

M1. Comprehensive Treatise (al-Risāla al-shāmila) - is mentioned in KZ (V 63).

M2. Western Treatise (al-Risāla al-maghribiyya) - is mentioned in KZ (V 63).

436. MUHAMMAD IBN BAJJA

Abū Bakr Muḥammad ibn Yaḥyā ibn al-Ṣā'igh al-Andalusī "Ibn Bājja" (d. 1138) was born in Zaragoza and worked in Seville and Fas, where he was the vizier of prince Yahya ibn Tasfin. Later he was accused of heresy and imprisoned. In medieval Europe he was known as "Avempace".

See: GAL (I 601), GAL² (I 830), IHS (II 183), KWA (II 7), KWA² (III 130), MAA (116-117), MAMS (II 326-327), PI (IV 49), UA (II 64); Adnan [5], Asin Palacios [1], Berman [1], de Boer [4] (156-160), S. Grigorian [2, 5], Dunlop [10], Farmer [4] (41-42), Farrukh [4], Ignatenko [7] (151-184), Moody [1], Quadri [2] (154-164), Pines [14], [19] (EI²), Radev [1] (176-193), Samsó [25a], Tuqan [1] (383-387), Ueberweg [1] (312).

A1. [Astronomical Treatise] is quoted in (No 534, PH1) by Maimonides [6] (323). Research: Duhem [2] (II 130-132), Gauthier [1]. The treatise contains a critique of Ptolemy's theory of epicycles as based on Aristotle's "Physics".

Ph1. Collection of Treatises by Sheikh Abū Bakr Muḥammad ibn Bājja al-Andalusī -(Majmū`a min kalām al-sheikh Abī Bakr Muḥammad ibn Bājja al-Andalusī) - Oxford (I 499). Research: Pines [9]. Commentary on Aristotle's "Physics". Here the idea of "moving force" was introduced; this idea in Western Europe inspired the notion of "Impetus".

PH1. Book on the Mode of Life of a Single Man (Kitāb tadbīr al-mutawaḥḥid). Edition with English translation: Dunlop [1]. Edition with Spanish translation by Asin Palacios: Ibn Bājja [2]. German translation from medieval Hebrew translation: Herzog [1]. Research: Chemli [1], Lomba [1].

PH2. About the Soul (Fī'l-nafs). Russian translation by Saghadeyev: Ibn Bājja [3].

B1. Book on Plants (Kitāb al-nabāt). Edition with Spanish translation by Asin Palacios: Ibn Bājja [1].

437. `UMAR AL-NASAFI

Najm al-Dīn Abū Ḥafs `Umar ibn Muḥammad ibn Aḥmad al-Nasafī (1068-1142), one of the most famous Hanifite scholars of his time, born in Nasaf (Nakhshab) in the South of Samarkand; he worked in Samarkand; philosopher and encyclopaedist.

See: GAL (I 427-428), IHS (II 164-165), PI (IV 181-186), PL² (I 210, II 1112, III 1331, 1384); Bulgakov [15].

E1. Place of Ascension of Stars and Collection of Sciences (Maṭla` al-nujūm wa majma` al-`ulūm) - Tashkent (1462 - unique). Research: Bulgakov [15, 26]. Encyclopaedical work in 57 chapters: 1-5) theology, 5-7) ethics, 8-11) Quran, 12-13) Hanifite version of religious, family, economic, and criminal Muslim law, 16) inheritance, 17-19) distinctions of Hanifite law school from other schools, 20-24) history, 25-26) Muslim traditions and sermons, 28-29) legal and economic documents, 30-45) stylistics, linguistics, and poetics, 46) astrology, 47) arithmetic of integers and fractions, 48) numerical mystic, 49-51) medicine and zoology, 52-57) occult sciences.

PH1. Catechism (al-`Aqā'id). Many editions and commentaries. Expositions: English - Cureton [1], French - d'Ohsson [1], German - Ziegler [1]. In the treatise the ideas on atomistic structure of space and time are discussed.

438. HIBATALLAH AL-BADI` AL-ASTURLABI

Abu'l-Qāsim Hibatallāh ibn al-Ḥusayn Badī` al-Zamān al-Asṭurlābī al-Baghdādī al-Iṣfahānī (d. 1140). Generally known as "Badī` al-Asṭurlābī" (Badī` al-Zamān = Unicum of the Time), poet, astronomer, and astrologer; worked in Isfahan and Baghdad at the court of Seljukid Sultan Mughīth al-Dīn Maḥmūd (1117-1131). He made astronomical observations in Baghdad in 1130.

See: HD (395), HD² (260), IHS (II 204), KWA (II 184), KWA² (III 580), KZ (III 202, 244, 261), MAA (117), MAMS (II 327-328), TH (339-340), UA (I 280); Abu'l-Fida [1] (III 441, 483), al-Kutubi [1] (II 390), Rosenthal [3], Sayılı [18] (175-177), Suter [27] (EI, EI²), Tuqan [1] (389-382).

A1. [Complement to the Book of al-Khujandī on the Universal Instrument] - Birmingham (560), Tehran (Nasiri). Complement to the work (No 269, A1) of al-Khujandī.

A2. Zīj of Mahmud (al-Zīj al-Maḥmūdī) - is mentioned in UA.

439. MAHMUD AL-ISFAHANI

Abu'l-Fatḥ Maḥmūd ibn Muḥammad ibn Qāsim ibn Faḍl al-Iṣfahānī (12th c.) from Isfahan, mathematician.

See: GAL² (II 856), GAS (V 140), IHS (I 664-665), MAA (98), MAMS (II 328).

M1. Concise Explanation of Conic Sections (Talkhīs al-makhrūṭāt) - Florence (270, 275 - I-VII books, 308 - I-V books), Istanbul (AS 2724 - fragment, TK 3455/1).). Latin translation of V-VII books by arabist Abraham Ecchelensis, edited and annotated by J. A. Borelli: Apollonius [1]. This edition is entitled: "V-VII Books of Conics Exposed by Abu'l-Fatḥ of Isfahan" (Conicorum lib. V, VI, VII paraphraste Abalphato Asphahanensi). Research: Bortolotti [1].

440. `ABD AL-`AZIZ AL-MIKNASI

Abū'l-Aṣbagh `Abd al-`Azīz ibn Muḥammad ibn Faraj ibn Sulaymān al-Qaysī al-Miknāsī (1060-1141), born in Jativa, lived and died in Granada; knowledgeable in inheritance and letters.
See: MAA (117-118), MAMS (II 328); Ibn al-`Abbar [1] (II 626).

441. `ABD AL-SALAM AL-IFRIQI

Abū'l-Ḥākim `Abd al-Salām ibn `Abd al-Raḥmān ibn Abi'l-Rijāl Muḥammad al-Lakhmī al-Ifrīqī al-Ishbīlī "Ibn Barrijān" (d. 1142) from Tunis; worked in Seville, died in Morocco; scholar of Qur'anic studies; mathematician and knowledgeable in philosophy. He used mathematics in mysticism.
See: KWA (I 491), KWA² (II 642), MAA (118), MAMS (II 328); Ibn al-Abbār [1] (II 559, 645).

442. MUWAFFAQ AL-MASQALI

Abū'l-Ḥasan Muwaffaq al-Masqālī (or Masfālī) (12th c.), freed slave from Almeria, reckoner and astronomer.
See: MAA (118), MAMS (II 328); Ibn al-Abbār [1] (I 408), [2] (196).

443. `ALI AL-SHIRWANI

Farīd al-Dīn Abu'l-Ḥasan `Alī ibn `Abd al-Karīm al-Shirwānī al-Fahhād (12th c.), from Shirwan, Azerbaijan; astronomer.
See: KZ (III 567-568), MAMS (II 329).
al-Fārisī (No 608), Lee [1] (255), al-Wabkanwī (No 709), KZ and SHIM (519) mention 6 Zījes of al-Shirwānī:
A1. Brilliant Zīj (al-Zīj al-zāhir).
A2. Reliable Zīj (al-Zīj al-muḥkam).
A3. Complete Zīj (al-Zīj al-mustawī).
A4. Moderate Zīj (al-Zīj al-mu`tadil).
A5. Sufficient Zīj (al-Zīj al-Mughnī).
A6. Zīj Based on Observations of `Ala al-Din (al-Zīj al-`Alā'ī al-raṣadī). Edition and English translation by Pingree: `A. al-Shirwānī [1]. Research: SIAT (128, 132-135).

444. MUHAMMAD IBN AL-AMIN

Abū `Abdallāh Muḥammad ibn Ibrāhīm ibn Yaḥyā ibn Sa`īd ibn al-Amīn (d. 1144), from Western Arabia; arithmetician, geometer and knowledgeable in inheritance.
See: MAA (118), MAMS (II 329); Ibn al-Abbār [1] (I 178).

445. ABU `ALI AL-MISRI

Abū `Alī Muhandis al-Miṣrī (12th c.) from Egypt, architect or geometer (muhandis) and poet.
See: HD (385), HD² (253), KWA (II 192), KWA² (III 599), MAA (118-119), MAMS (II 329), TH (410).

446. MUHAMMAD AL-FAWANISI

Muḥammad ibn `Umar ibn Ṣadīq al-Bakrī al-Fawānisī (or al-Qawānisī) (11-12th c.), astronomer, worked in Egypt. MAA believes that he lived in 16th c.
See: GAL (II 469), GAL² (II 485), KZ (VI 297-298), MAA (193), MAMS (II 329-330), SSM (100).
A1. Result of Reflections on Operations [of Timekeeping] in the Day and Night (Natījat al-afkār fī `amal al-layl wa'l-nahār) - Cairo (mīqāt 950), Oxford (I 1032), Paris (2545), is quoted in KZ.
A2. Aim of Pupils on Operations with the Astrolabe (Bughyat al-ṭullāb fi'l-`amal bi'l-asṭurlāb) - Paris (4580/4), Tripoli (Um. 1120).

447. AHMAD AL-ASH`ARI AL-YAMANI

Abū'l-Ḥasan Aḥmad ibn Muḥammad ibn Ibrāhīm al-Ash`arī al-Yamanī al-Nassāba al-Ḥanafī (12th c.), Yemeni mathematician.

See: GAL² (I 558), KZ (I 426), MAY (54), SSM (131), TIFI (231).

M1. Brief on the Science of Measurement (al-Tuffāḥa fī `ilm al-misāḥa) - Florence (Med. 32/2), Hyderabad (riyāḍa 800), Istanbul (NO 2524/2), Milan (29/2). Treatise on surveying.

448. JABIR IBN AFLAH

Abū Muḥammad Jābir ibn Aflaḥ (12th c.) from Seville, astronomer and mathematician. In medieval Europe he was known as "Geber".

See: GAS (V 63), IHS (II 206), MAA (119-120), MAA² (174), MAMS (II 330), SSM (135); Baldi [1] (524-528), Delambre [1] (179-185), Hugonnard-Roche [3], Lorch [1] (DSB), [2-4], [18] (ENWC), Samsó [22] (LM), Suter [28] (EI, EI²).

M1. On Figure of Secants (Fī'l-shakl al-qaṭṭā `). Only medieval Hebrew translation is extant: Oxford (Hebr. 433/2).

A1. Improvement of "Almagest" (Iṣlāḥ al-Majisṭī) = Book on Astronomy, That Is, Abridgement of the Work "Almagest" (Kitāb al-hay'a wa-huwa talkhīṣ kitāb al-Majisṭī) - Berlin (5653), Escorial (II 910, 930), Oxford (I 940/1). Description of the Berlin manuscript: Ahlwardt [1] (141). Description of the Escorial manuscript: Derenbourg [7] (10-11, 39). Latin translation by Gherard of Cremona: Ibn Aflah [1]. Research: Braunmühl [1] (81-83) - trigonometry, Duhem [2] (I 172-179) - planetary motions, Swerdlow [2]. Work in 9 books: 1-2) introductions, 3) movement of the Sun, 4) movement of the Moon, 5) sizes of the Earth and celestial spheres, 6) fixed stars, 7-9) motions of 5 planets. Research: Samsó [36].

449. ABU `ALI AL-MATTIJI

Abū `Alī al-Mattījī (12th c.), Spanish astronomer.

See: Rius [1].

A1. Book of Indications of Qibla (Kitāb dalā'il al-Qibla) - Paris 5311/2). Research: Rius [1].

450. KAYKHUSRAW AL-SHIRAZI

Abū'l-Ḥasan Kaykhusraw ibn `Alī al-Shīrāzī (12th c.), from Shiraz, astronomer.

See: MAMS (II 330).

A1. Treatise on the Astrolabe (Risālat al-asṭurlāb) - Istanbul (NO 2917).

A2. Treatise on Circle of Sine Quadrant (Risāla fī dāirat al-rub` al-mujayyab) - Istanbul (NO 2918).

451. IBN AL-QASIM AL-BAGHDADI

Ibn al-Qāsim al-Baghdādī (12th c.), from Baghdad, astronomer.

See: MAMS (II 330).

A1. Book on the Science of Astrolabe (al-Kitāb fī `ilm al-asṭurlāb) - St. Petersburg (B 815).

452. MUHAMMAD AL-SARAQUSTI

Abū `Abdallāh Muḥammad ibn Sulaymān al-Tujībī al-Saraqusṭī (12th c.), born in Zaragoza, worked in Almeria; scholar of Qur'anic studies, arithmetician, also knowledgeable in inheritance.

See: MAA (120), MAMS (II 331); Ibn al-Abbār [1] (I 182).

453. AHMAD NIZAMI SAMARKANDI

Abū'l-Ḥasan Aḥmad ibn `Umar ibn `Alī Niẓāmī `Arūḍī Samarkandī (12th c.), from Samarkand, historian and man of letters.

See: IHS (II 363), KZ (II 656, V 404, VI 468), MAMS (II 331); Abdullayev and Hikmatullayev [1] (24-28), Boldyrev [1], Browne [3] (II 336-340), Massé [1] (EI, EI²), [3] (IA).

HS1. Collection of Rarities (Majma` al-nawādir) = Four Discourses (Chahār maqāla) P - Cairo (Ṭal`at 9), Mashhad (77, 283, 957/27, 3488, 4520-4522, 5675/25, 8928, 9311/1), Tehran (90, 286, 619/2, 669; Malik 521/2, 2277; Sipahsalar 4939/1; Univ. 2941, 5019, 5262, 6807, 6892, Ilah. 59), Yazd (Jāmi` 5293/6). Edition by Qazwini and Mu`in: Niẓāmī [1, 3]. English translation by Browne: Nizami [2]. Russian translation by Bayevskiy and Vorozheykina: Nizami [4]. Tajiki transcription: Nizami [5].

454. MANSUR AL-DAMAGHANI

Abū Sa'īd Manṣūr ibn 'Alī Bandar al-Damaghānī (12th c.), astronomer.
See: GAL² (I 864), MAMS (II 331).
A1. Collection of Speeches of Ancient and Modern Astronomers on Predictions According to Birthdays (Majmū' aqāwīl al-ḥukamā al-munajjimīn al-qudamā minhum wa'l-muḥdathīn fī aḥkām taḥāwīl sinī al-mawālīd) - London (5583, 5671), Princeton (Garr. 970). Description of the Princeton manuscript: Hitti, Faris, and 'Abd-al-Malik [1] (308).
A2. Foundations of Predictions of Stars (Asās al-aḥkām al-nujūmiyya). Persian translation: Tehran (Malik 3331).

455. AL-ZUBAYR AL-FARADI

Abū Muḥammad al-Zubayr ibn Muḥammad al-Faraḍī (12th c.), from Denia, Spain, scholar of Qur'anic studies, arithmetician, also knowledgeable in inheritance.
See: MAA (120), MAMS (II 332); Ibn al-Abbār [1] (I 73), [2] (88).

456. MUHAMMAD IBN AL-NATTAH

Muḥammad ibn 'Alī ibn Yaḥyā ibn al-Naṭṭā ḥ (12th c.), astronomer.
See: MAA (198), MAMS (II 332), SSM (136).
A1. [Treatise on Operations with the Astrolabe] - London (405/1).

457. MUHAMMAD IBN MANSUR

Muḥammad ibn Mansūr (12th c.), naturalist.
See: MAMS (II 332), STMI (494).
Ph1. Treatise on Halos and Rainbows (Risāla dar hāla wa qaws-i quzaḥ) P - Oxford (1550).

458. AHMAD IBN AL-SURA

Najm al-Dīn Abū'l-Futūḥ Aḥmad ibn Muḥammad ibn al-Surā (or al-Surī) born in Hamadhan, worked in Baghdad; he was known by the name "Ibn al-Ṣalāḥ" (d. 1153), scholar of mathematics and logic, also an astronomer.
See: GAL² (I 875), MAA (120), MAMS (II 332-334), SSM (148), TH (428), UA (II 164); De Young [5], Kunitzsch [17], Tuqan [1] (368-369).
M1. Book on Property of Projecting Spherical Surface onto a Plane (Kitāb fī kayfiyyat tasṭīḥ al-basīṭ al-kurī) - Istanbul (TK 3342/2), Tehran (4345/9). Research: Lorch [20].
M2. Answer on Proof of a Problem Attributed to the Seventh Book of Euclid's Work "Elements" and Related Discussions (Jawāb 'an burhān mas'ala muḍāfa ilā'l-maqāla al-sābi'a min kitāb Uqlīdis fī'l-uṣūl wa-sā'ir mā jarrahu al-kalām fīhi) - Istanbul (Millet, Feyzullah 1366/3; SM AS 4830/8c).
M3. Reasoning on Proof of what was Meant by Abu 'Ali Ibn al-Haytham in His Book on Doubts in Euclid (Qawl fī bayān mā wahama fīhi Abū 'Alī ibn al-Haytham fī kitābihī fī'l-shukūk 'alā Uqlīdis) - Istanbul (Millet, Feyzullah 1366/4; MS AS 4830/8d). Research: De Young [5]. Commentary on the work (No 328, M2) by Ibn Haytham.
M4. Reasoning on Explanation of the Error of Abū 'Alī ibn al-Haytham on the First Proposition of the Tenth Book of Euclid's Work "Elements" (Qawl fī īḍā ḥ ghalaṭ Abī 'Alī ibn al-Haytham fī'l-shakl al-awwal min al-maqāla al-'āshira min kitāb Uqlīdis fī'l-uṣūl) - Istanbul (SM AS 4830/8e, Kılıç 675/3). Commentary on the work (No 328, M12).
M5. Book Revealing the Doubts of those who study Mathematical Sciences by Euclid in the Fourteenth Proposition of the Twelth Book of the Work "Elements" (Maqāla fī kashf al-shubha allatī 'araḍat li-jamā'a miman yansubu nafsahu ilā 'ulūm al-ta'ālīm 'alā Uqlīdis fī'l-shakl al-rābi' 'ashar min al-maqāla al-thāniya 'ashara min Kitāb al-uṣūl) - Istanbul (Millet Feyzullah 1366/5; SM AS 4830/8f).
M6. Book on the Falsity of Premises of the Book of Abū Sahl al-Kūhī which states that the Ratio of the Diameter to the Circumference is as One to Three and One Ninth (Maqāla fī tazyīf muqaddimāt maqālat Abī Sahl al-Kūhī fī anna nisbat al-quṭr ilā al-muḥīṭ nisbat al-wāḥid ilā thalātha wa tus') - Istanbul (Millet Feyzullah 1366/6; SM AS 4830/8g). Photo-reproduction of the first two pages of the manuscript SM AS: Sesiano [5]

(293-294). French translation: Sesiano [5] (289-290). Research: Sesiano [5]. Commentary on the work (No 277, M22) of al-Kūhī.

M7. From the Sayings of Abū'l-Futūḥ ibn al-Surā (Min kalām Abū'l-Futūḥ ibn al-Surā) - Leiden (14/10). German translation: Suter [29] (27-30). Research: Ruska and Hofmann [1]. Treatise contains 3 geometric problems.

M8. Geometric Problems (Masā'il al-handasiyya) - Cairo (riyāḍa 898/10), Leiden (14/4). Commentary on the work (No 252, M1) of Jābir al-Ṣābī'.

A1. Reasoning on Establishment on an Error and a Fault in Tables of the Seventh and Eighth Books of the Work "Almagest" and their Possible Correction (Qawl fī thabt al-khaṭa' wa'l-taṣḥīf al-`āriḍayn fī jadāwil al-maqālatayn al-sābi`a wa'l-thāmina min kitāb al-Majisṭī wa taṣḥīḥ mā amkana taṣḥīḥuhi min hadhā) - Istanbul (TK 3455/16), Manisa (1706/10), Oxford (I 913/1, 940/11). Edition with German translation by Kunitzsch: Ibn al-Sura [1]. Research: Kunitzsch [17].

A2. Reasoning on Proof of an Error which is in a Problem Mentioned in the Third Book of Aristotle's Work "On the Heavens " and in all Commentaries and Interpretations Explaining this Problem (Qawl fī bayān al-khaṭā' al-`āriḍ fī ma`nā madhkūr fī'l-maqāla al-thālitha min kitāb Arisṭūṭālis fī'l-samā wa'l-`ālam wa fī jamī` al-shurūh wa'l-ta`ālīq allātī ta`riḍu fīhā bi īḍā ḥ al-ma`nā) - Istanbul (Millet Feyzullah 1366/2; SM AS 4830/8). Commentary on Aristotle's book "On the Heavens".

A3. Reasoning on Proof of the Error made by Abu Nasr al-Fārābī in his Commentary on the Seventeenth Section of the Fifth Book of "Almagest" and the Explanation of this Section (Qawl fī bayān mā wahama fīhi Abū Naṣr al-Fārābī `inda sharḥihī al-faṣl al-sābi` `ashar min al-maqāla al-khāmisa min al-Majisṭī wa sharḥ hadhā al-faṣl) - Mashhad (5593). Commentary on the work (No 180, A1).

A4. On what Ptolemy Mentioned in the Second Chapter of the Twelfth Book on Defining the Magnitude of the Retrograde Movement of Saturn and in the following four chapters on retrograde Movement of Remaining Planets ([Mā] dhakarahu Baṭlamyūs fī'l-bāb al-thānī min al-maqāla al-thāniyya `ashar fī marifat miqdār rujū` Zuḥal wa fī'l-abwāb al-arba`a allatī ba`dahu li rujū` bāqī al-kawākib) - Istanbul (TK 3455/15, Khaz. 455), Oxford (I 913).

459. MUHAMMAD AL-ZAKI AL-GHAZNAWI

Ẓahīr (Sharaf) al-Dīn Abū'l-Maḥāmid Muḥammad ibn Mas`ūd ibn Muḥammad al-Mas`ūdī al-Zakī al-Ghaznawī (12th c.), from Ghazna, astronomer and grammarian, worked in India.

See: GAL² (I 863-864), (KZ (II 39, III 384, V 233), MAA (98), MAMS (II 334-335), PL (II 5, 46-47), SSM (154-155), STMI (377, 411); al-Bayhaqī [1] (190-191), A. Qadyrov [1].

M1. Friend of Distinguished [Men] (Mu'nis al-fuḍalā) P - Rampur (2323; Nadhir 249). Arithmetic treatise dedicated to `Abd al-Muwayd Muḥammad ibn Bahram-Shah, Delhi Sultan (1240-1242).

M2. Treatise on Algebra and Almucabala (Risālat al-jabr wa'l-muqābala) - is mentioned in KZ (III 384).

A1. Sufficient Knowledge of the Art of Astrology (Kifāyat al-ta`līm fī ṣinā`at al-tanjīm) = Limit of Knowledge of the Art of Astrology (Nihāyat al-ta`līm fī ṣinā`at al-tanjīm) P - Baku (B 10), Bombay (41, 78-79), Cairo (Ṭal`at falak fārisī 8, 12), Calcutta (1500, Curz. 395, 566), Cambridge (Sup. 3612/8), Dushanbe (417), Istanbul (NO 2797; SM AS 2699, Esat 1972, Esmi khan 297, Vehbi 894), Jerusalem (263), Lahore (Univ. 10), Leiden (1196), London (11630), Mashhad (Mawlawi 404), Oxford (409, 1144, 2030), Paris (150, 170, 904), Patna (1049-1050), Rayy (`Abd al-`Aẓīm 245), St. Petersburg (B 838; Univ. 415), Tashkent (442/1, 507, 703, 3658), Tbilisi (K 147), Tehran (111, 201, 2888; Senat 2251; Univ. 1914/2, 1948, 3338, 4370, Adab. 8, 60, Ilah. 70, 239).

Treatise in 2 parts: 1) astronomy, 2) astrology. Arabic translations: Berlin (5891), Cairo (Ṭal`at mīqāt 153, 244), Cambridge (Sup. 1279), Istanbul (BU 4679; SM Esat 1972). Description of the Berlin manuscript: Ahlwardt [1] (289-291). Description of the Tashkent manuscripts 442/1 and 703: SVR (226-227).

A2. Knowledge of the World (Jihān-dānish) P - Berlin (328), Istanbul (BU 4639; NO 2905; SM AS 2601/2, 2602-2603), Leiden (1196), London (Sup. 154), Manchester (Lind. 708), Najaf (Tarihi 299/51), Oxford (1497), Paris (775-776, 1306), Rome (Vat. 1398/2), Tabriz (599/5), Tehran (4066; Ma`arif 120, 251; Univ. 4596/1). Description of the Istanbul manuscripts: SHIM (512). Treatise in 2 parts coinciding with parts of A1. KZ (V 223) believes that A2 is the Persian version of A1.

A3. Treatise of Baha al-Din (Risāla bahā'iyya) P - Tashkent (2319).

460. `ADNAN IBN `AYNZARBI

Muwaffaq al-Dīn Abū Naṣr `Adnān ibn Manṣūr ibn al-`Aynzarbī (d. 1153), from `Ayn Zarba, Cilicia. Worked in Baghdad and Cairo at the court of Fatimid Caliph al-Ẓāfir (1149-1154), astrologer and author of many works in medicine and logic; died in Cairo.

See: GAL (I 641-642), GAL² (I 890), IHS (II 234), KZ (V 21), MAA (120-121), MAMS (II 225).

M1. Geometric Letters which Ibn Zubayr and Abu Nasr ibn `Aynzarbī Exchanged (Rasā'il handasiyya jarat kitābatuhā bayna Ibn al-Zubayr wa bayna Abī Naṣr ibn al-`Aynzarbī) - Beirut (Greek 364/8). Correspondence with a certain Ibn al-Zubayr.

A1. What is Necessary to Physicians from Astronomy (Fīmā yaḥtāju al-ṭabīb min `ilm al-falak) - Berlin (6247).

461. MUHAMMAD AL-SHAHRASTANI

Abū'l-Fatḥ Muḥammad ibn `Abd al-Karīm al-Shahrastānī (ca 1080-1153), from Khurasan, philosopher and historian of science.

See: GAL (I 550-551), GAL² (I 762-763), KZ (II 73, 125, 400, III 98, IV 135, V 574, VI 116, 398), MAMS (II 335-336); al-Bayhaqī [5] (85), Browne [3] (II 362-363), Carra de Vaux [21] (EI), Tancî [1] (IA).

H1. Book on Religions and Sects (Kitāb al-milal wa'l-niḥal) - Bologna (112), Cambridge (Browne 105), Escorial (1525, 1601, 1701), Kabul (Ma`arif 42; Matb. 261; Muz. 195), London (Ind. 382/3), Manchester (293), Mashhad (251/4), Paris (1900/7, 6001), Patna (976/7), Peshawar (705/6), Princeton (Brill 902), Rampur (I 322/3). Edition by Cureton: al-Shahrastānī [2], other editions: al-Shahrastānī [1, 4]. German translation by Haarbrückner: al-Shahrastānī [3]. Russian translation by Prozorov: al-Shahrastani [6].

PH1. Book of Limit of Audacity on the Science of Kalām (Kitāb nihāyat al-iqdām fī `ilm al-kalām). Edition by Guillaume: al-Shahrastānī [5]. Research: Damardash [6] (on indivisible elements).

462. MUHAMMAD AL-ANSARI

Abū `Abdallāh Muḥammad ibn Yūsuf ibn `Amīra al-Anṣārī (d. 1155), from Orijuela near Murcia, Spain; scholar of Qur'anic studies; arithmetician; knew inheritance well.

See: MAA (112), MAMS (II 336); Ibn al-Abbār [1] (I 199).

463. MUHAMMAD AL-HINDI

Muḥammad ibn `Alī ibn `Abdallāh al-Hindī (11-12th c.), from India, scholar-encyclopaedist.

E1. Problems of Philosophy (Jumal al-falsafa) - Istanbul (SM Esat 1918). Facsimile edition with Arabic and English introductions by Sezgin: al-Hindī [1]. Research: S. Brentjes [4] (arithmetic), Hogendijk [14] (geometry), Neubauer [3] (music). Encyclopaedia in the form of questions and answers, written under the influence of treatises of Ikhwan al-Safa (No 226, E1), in 7 parts: 1) arithmetic, 2) geometry, 3) astronomy, 4) music, 5) logic, 6) physics, 7) theology.

464. `UBAYDALLAH AL-BAHILI

Abū'l-Ḥakīm `Ubaydallāh ibn al-Muẓaffar ibn `Abdallāh al-Bāhilī al-Andalusī (1093-1155), born in Almeria, Spain, traveled in Mashriq; poet, physician, geometer, knew philosophy and literature well.

See: HD (396), HD² (261), KWA (I 274), KWA² (II 82), KZ (III 255, VI 409), MAA (121), MAMS (II 336), UA (II 144-155); al-Maqqarī [1] (I 385, II 17),

465. MUHAMMAD AL-SIQILLI

Abū `Abdallāh Muḥammad ibn `Isā ibn `Abd al-Mun`im al-Ṣiqillī (12th c.), Sicilian poet, geometer, and astronomer.

See: MAA (121-122), MAMS (II 336); Amari [1] (587, 619).

466. UMAYYA IBN `ABD AL-`AZIZ

Umayya ibn `Abd al-`Azīz (12th c.), astronomer.

See: MAMS (II 336).

A1. Treatise on the Astrolabe (Risālat al-asṭurlāb) - Istanbul (SM Laleli 2726/4).

467. SHAH MARDAN RAZI

Ḥakīm Shāh Mardān ibn Abī'l-Khayr Rāzī (12th c.), from Rayy, astronomer.

See: GAL² (II 42), GAS (VI 246), MAMS (II 337), PL (II 45, 348-349), SSM (51).

E1. Book of Delight for `Alā' al-Dīn (Nuzhat-nāma-yi `Alāī) P - Calcutta (1358), Dublin (Beatty 115), Gotha (10), Montreal (McGill Univ.), Oxford (1480), Tehran (784). Book in 12 chapters 1) man, 2) quadripeds, 3) birds, 4) plants, 6) minerals, 7) elements, space, and time, 8) arithmetic, logic, astronomy, and astrology, 9) physiognomics, 10) meteorology, 11) on interpretation of dreams, 12) chemistry.

A1. Garden of Astrologers (Rawḍat al-munajjimīn) P - Berlin (quart. 848), Bombay (Firuz 39), Cairo (falak 3774/4, Ṭal`at falak fārisī 11), Istanbul (NO 2788), Leiden (1196), London (11039, 27261), Paris (848, 852/1, 870/1, 2053), Tehran (112/1; Univ. Ilah. 12, 70/1). Partial English translation: King [15] (498-409). Work in 15 books written in 1073. In addition to astrology, they contain exposition of the astronomy of stars and planets and the theory of the astrolabe.

468. MUHAMMAD IBN RAYYAN

Abū `Abdallāh Muḥammad ibn Munakhkhal ibn Rayyan (d. 1156), born in Valencia; scholar of Qur'anic studies, grammarian, arithmetician and geometer.

See: MAA (122), MAA² (174), MAMS (II 337); Ibn al-Abbār [1] (I 204).

469. `ABD AL-JABBAR AL-KHARAQI

Abū Muḥammad `Abd al-Jabbār ibn `Abd al-Jabbār ibn Muḥammad al-Thābitī al-Kharaqī (d. 1158), from Kharaq near Marw, worked in Marw, died in Kharaq; astronomer, geographer, philosopher, historian, and author of "History of Marw".

See: AGL (311-313), GAL (I 624), GAL² (I 863), IHS (II 204-205), KZ (II 145, 180, VI 170), MAA (116), MAA² (173-174), MAMS (II 325-326, 337), SSM (148); Atagharryyev [9], al-Bayhaqī [1] (192), [5] (91), Pingree [65] (EIr), Rosenfeld [56] (ENWC), Tuqan [1] (366-367), Wiedemann [196] (EI), Wiedemann and Kohl [1].

A1. Ultimate Comprehension of Subdivision of Celestial Spheres (Muntahā al-idrāk fī taqāsīm al-aflāk) - Berlin (5669), Cairo (falak 7196, hay'a 74, Taymūr riyāḍa 111), Florence (290), Oxford (I 911), Paris (2499), Tashkent (4467), is mentioned in KZ (VI 170). Description of the Berlin manuscript: Ahlwardt [1] (155-156). Description of the Tashkent manuscript: SVR (XI 96-98). Edition of geographical chapter: Nallino [1] (I 169-175). German translation of the foreword: Wiedemann and Kohl: [1] (205-209). Research: Ahmedov and Jalilova [1], Jalilova [1], Wiedemann and Kohl [1], Wiedemann and Frank [5]. Treatise in 3 books: 1) astronomy, 2) geography, 3) chronology. In (1) the theory that planets move in tubes inside massive rotating spherical rings is explained, as in works of al-Khāzin (No 194), Ibn al-Haytham (No 328, M12), and al-Bīrūnī (No 348).

A2. Introduction to the Science of Astronomy (al-Tabṣira fī `ilm al-hay'a) - Berlin (5670), Cairo (Tal`at hay'a 35, 38/2), Florence (Med. 89), Istanbul (NO 2898; SM AS 2578-2581, 2587, 4857/3, Beşir 105, Carullah 1483, Fatih 3385, Halis 7689, Selim. 741/2; TK 3341/2), London (1339/2), Oxford (I 911, 921, 976, Layell 100/2), Rome (Vat. Borg. 260/10), is mentioned in KZ (II 180). Description of the Berlin manuscript: Ahlwardt [1] (156). Description of the Escorial manuscript: Derenbourg [7] (91-92). Photo-reproduction of pages from a Cairo manuscript with planetary spheres and Lunar stations: SSM (225). German translation of the foreword: Wiedemann and Kohl [1] (109-211), Partial Latin translation: Nallino [1]. Research: Wiedemann and Kohl [1]. Abridged exposition of A1 in 2 parts: 1) "On the Heavens", 2) "On the Earth".

470. MUHAMMAD AL-IDRISI

Abū `Abdallāh Muḥammad ibn Muḥammad ibn `Abdallāh ibn Idrīs ibn Ḥammūdī al-Ḥasanī al-Qurṭubī al-Ṣiqillī "al-Idrīsī" (1100 - ca 1165), the greatest geographer and cartographer in medieval Islam, born in Ceuta, studied in Cordoba, worked in Palermo, Sicily, at the court of Norman Kings Roger II (1130-1154) and William I (1154-1166).

See: AGL (287-299), GAL (I 477), GAL (II 876), IHS (II 410-412); Maqbul Ahmad [6a] (DSB), [121] (ENWC), G. Omar [1] (EI²), Rommel [1], Seybold [5] (EI).

G1. Book of Roger (Kitāb al-Rūjar) = The Journey of those who wish to see the Horizons (Nuzhat al-mushtāq fī ikhtirāq al-āfāq). Editions: al-Idrīsī [1, 3]. French translation by Jaubert: al-Idrīsī [2]. Research: Amari and Schiaparelli [1] (Italy), Beeston [1] (British Isles), Bredow [1] (world map), Dozy and De Goeje [1] (Spain), Ekblom [1, 2] (Baltic), Furlani [2] (Giulia and Dalmatia), Hoenerbach [1] (Germany), Levicki [1] (Ukraine), Maqbul Ahmad [3] (India), Miller [1] (world map), Mžik [3] (Africa), Nedkov (Bulgaria), Rybakov [1] (Russia), Saavedra [1] (Spain), Schiaparelli [1] (Italy), Tuulio [1] and Tuulio and Tuulio-Tallgren [1] (North-Eastern Europe).
Geographical encyclopaedia with detailed description of all the countries of Europe, Asia, and Africa with many maps: one round map of the world, and 70 partial maps: whole inhabited part of the Earth is divided to seven climates parallel to the terrestrial equator and to ten strips by meridians and each partial map is the map at the intersection of these climates and strips. Unlike other Muslim geographers al-Idrīsī describes not only Asia and Africa but also countries of Europe including Britain, France, Germany, Italy, Scandinavia, Baltic, and Russia. Particularly Tallinn (Kalūbān = old Russian Kolyvan) in Estonia (āstlānda) is first mentioned in this work. In the chapter on Northern Europe, Norway (Nurwāgha) with the city Oslo (Uslū) and Denmark (Danmarkha) and in the chapter on Russia, the rivers Dnestr (Dnast), Dnepr (Dnabr) and Don (nahr Rūsiyya) are mentioned (note that the name "nahr" = river for Don is the Arabic translation of Scythian name Don for this river). The book was written for King Roger II and was finished in 1154. Al-Idrīsī's maps are reproduced in K. Miller [1].

G2. Entertainment of Hearts, and Meadows of Contemplations (Uns al-muhaj wa rawḍ al-furaj). Facsimile edition of two Istanbul manuscript: al-Idrīsī [4]. Geographical work written in 1161 for King William I.

B1. Comprehensive Book of the Properties of Diverse Plants and Various Kinds of Simple Drugs (al-Kitāb al-jāmi` li-ṣifāt ashtāt al-nabāt wa ḍurūb anwā` al-mufradāt). Facsimile edition of Istanbul and Tehran manuscripts: al-Idrīsī [5].

471. ZAHIR AL-DIN AL-BAYHAQI

Ẓahīr al-Dīn Abū'l-Ḥasan `Alī ibn Abī'l-Qāsim al-Bayhaqī (1106-1169) was born in Nishapur; he was known by the name "Ibn Funduq" (son of the owner of an inn); worked in Nishapur and Marw; mathematician, astronomer, also knowledgeable in history and philosophy.

See: GAL (I 395), GAL² (I 513, 557-558), IHS (II 445), KZ (II 636, IV 141, Vi 243, 436), MAMS (II 337-338), PL (I 353-354, 1105, 1295-1296, II 48), PL² (1040-1042); Barthold [3, 10] (EI), Dunlop [3] (EI²), K. Husayni [1], Köprülü [3] (IA), Wiedemann [46], Zambaur [2].

HS1. Supplement to "Guardians of Wisdom" (Tatimmat Ṣiwān al-ḥikma) - Berlin (10052), Istanbul (Köprülü 902; Murad 1431; SM Beşir 494, Fatih 3222), Mashhad (XIV 8624), Tashkent (1448). Editions: al-Bayhaqī [1-2]. Facsimile edition of the chapter of the Berlin manuscript about Khayyām: Swami Govinda [1] (32-33). German translation of some chapters on mathematicians: Wiedemann [37]. English translations of some chapters by Meyerhof and K. Husayni: K. Husayni [1] (I 56-59, II 77-83), al-Bayhaqī [3]. Russian translation by Baghirova: al-Bayhaqī [5]. Research: Baghirova [1], K. Husayni [1] (I 56-59, II 77-83), Meyerhof - al-Bayhaqī [3], Vahabova [1], Wiedemann [37, 45]. Biographies of scientists, continuation of "Guardians of Wisdom" (Ṣiwān al-ḥikma) of Abū Sulaymān Muḥammad ibn Ṭāhir ibn Bahrām al-Sijzī (10th c., See: GAL (I 377-378).

M1. Book on Arithmetic (Kitāb fī'l-ḥisāb) - is mentioned by K. Husayni [1].

A1. Collection of Predictions of Stars (Jawāmi` aḥkām al-nujūm) P - Calcutta (1493), Hyderabad (riyāḍa 29), Kapurthala, Lahore (Univ. 10/3), Madras (Firuz 76), Mashhad (Mawlawi 8), Najaf (Amir 10, Jami`a 51433), Rasht (Majm. 75/2), Tashkent (443), Tehran (2135, 2231, 4041; Dihkhuda 237; Malik 3231, 3368, 3620; Sipahsalar 1103; Univ. 489, Ilah. 21, 518).

KZ (VI 436) informs that A1 is a book in 10 chapters:

K. Also mentioned by Husayni:

A2. Essence of a Zīj (Khulāṣat al-zīj).

A3. Knowledge of the Armillary Sphere, the Celestial Globe, and the Astrolabe (Ma`rifat dhāt al-ḥalaq wa'l-kura wa'l-asṭurlāb).

472. IBN `ABD AL-MUN`IM

Ibn `Abd al-Mun`im (12th c.), worked in Palermo, Sicily, at the court of Norman King Roger II (1130-1154).

See: GAS (V 61-62), MAMS (II 338); Renaud [6].

M1. Book of Law of Arithmetic (Kitāb fiqh al-ḥisāb) - is mentioned by Renaud [6]. Renaud informs that algebraic symbols first appeared in this work.

473. `ABD AL-QADIR AL-KILANI

Muḥyī al-Dīn `Abd al-Qādir ibn `Abdallāh al-Kīlānī (al-Gīlānī or al-Jīlānī) (1078-1167), born in Gilan, studied in Baghdad; founder of the Sufi Qadiriyya order; astronomer.

See: GAL (I 560-563), GAL² (I 777-779), SSM (148); Braune [1] (EI²).

PH1. Sufficient (Ghunya) - Cairo (falak majlis 180/17). Edition: al-Kilani [1]. Section on Time Reckoning by the length of shadows: al-Kīlānī [1] (II 89-90).

474. MUHAMMAD AL-SHAHRAZURI

Muḥammad ibn `Alī ibn al-Ḥasan ibn Aḥmad al-Shahrazūrī (11-12th c.), from Shahrazur, mathematician, teacher of al-Samaw'al (No 487).

See: GAS (V 328), MAMS (II 338).

M1. Corrective Commentary on the Book "Sufficient Book on Arithmetic" (al-Sharḥ al-shāfī <`alā> al-kitāb al-Kāfī fī'l-ḥisāb) - Istanbul (Yeni Cami 801). Commentary on the work (No 309, M1) of al-Karajī. The name of the author in the manuscript was written as al-Shahzūrī. The treatise was written in 1194.

475. ABU'L-HUSAYN AL-DASKARI

Abū'l-Ḥusayn ibn Abī'l-Ma`ālī al-Daskarī (11-12th c.), mathematician and astronomer, teacher of al-Samaw'al (No 487).

See: GAL² (I 857), GAS (V 392), MAMS (II 339).

M1. Method of Determining [Unknowns by Means of] Two Errors (Ṭarīqa fī istikhrāj al-khaṭa'ayn) - Istanbul (SM Fatih 3439/23). Description of the manuscript: SHIM (517).

476. `ABD AL-RAHMAN AL-KHAZINI

Abū Manṣūr `Abd al-Raḥmān al-Khāzinī (12th c.), Byzantine Greek, former slave of `Alī al-Khāzin al-Marwazī in Marw who educated him and pupil of Khayyām (No 420); astronomer and mechanician, worked at the court of Seljuk Sultan Sanjar (1118-1157).

See: GAL² (I 902), IHS (II 216-217), KZ (II 636, IV 141, VI 243, 436), MAA (122, 126), MAMS (II 339-341); al-Bayhaqī [5] (94), Hall [1] (DSB), Lorch [5-6], [13] (LM), Rozhanskaya [20-21], Samsó [34] (ENWC), Sayılı [18] (177-178), Wiedemann [195] (EI).

A1. Considered Zīj of Sultan Sanjar (al-Zīj al-mu`tabar al-Sanjarī al-sulṭānī) - London (669), Rome (Vat. 761), Tehran (19/5; Sipahsalar 681 - incomplete). Description of the Roman manuscript: SIAT (159-161). Research of mathematical chapters: Abdurahmanov [5]. Zīj in 12 books: 1) chronological tables, 2) trigonometrical tables (of sines and tangents) with rules of linear and quadratic interpolation, 3-12) astronomical and astrological tables.

A2. Abridgement of the Zīj of Sultan [Sanjar] (Wajīz al-zīj al-mu`tabar al-sulṭānī) - Istanbul (SM Hamid. 859).

A3. Treatise on [Astronomical] Instruments (Risāla fī'l-ālāt) - Tehran (Sipahsalar 682). English and Turkish translations and research: Sayılı [12]. Research: Lorch [4-5]. Treatise in 7 books: 1) triquetrous, 2) "instrument with two apertures", 3) "instrument with third of circle", 4) quadrant, 5) reflective instrument, 6) astrolabe, 7) other instruments. Each book contains 3 chapters: a) description of the instrument, b) operations with the instrument, c) geometric proofs.

Me1. Book on Balance of Wisdom (Kitāb mīzān al-ḥikma) - Bombay (Mosque), St. Petersburg (Nat. Khan. 117). Edition of the Bombay manuscript: al-Khāzinī [1]. Description of the St. Petersburg manuscript and partial edition with English translation: Khanykov [1]. Russian translation by Rozhanskaya and Levinova: al-Khāzinī [2] (15-140). Russian translation of the chapter on balance of Khayyām with facsimile edition of this chapter in the St. Petersburg manuscript: Khayyām [25] (147-151, Arab. 63-67). Russian translation of the chapter on determining specific weights by al-Bīrūnī: al-Bīrūnī [22] (249-265). German translations of some chapters Ibel [1] (80-83) - contents, (85-88) - on premises of Ibn al-Haytham and al-Kūhī, (107-151) - on "balance of wisdom", (153-154) - on determining specific weights, Wiedemann [24] (Archimedes' law), [25] (46-54) - mathematical problems, in particular, on chess, [32] (107-132) - on determining magnitudes of metals in alloys, [33] (133-158) - on swimming and on level balance, [53] (28-38) - on "balance-clock". Research:

Bauerreiss [1], Gari [1], Ibel [1], Jami`an [1], Levinova [2-3), Levinova and Rozhanskaya [1-2], Lorch [8a]. Rozhanskaya [8] (82-85, 101-103, 113-117, 122-126, 132-133), [18], by Rozhanskaya and Levinova - al-Khāzinī [2] (276-308), Stolyarova [3-4], Wiedemann [10, 21, 23-25, 31-33, 51, 53, 64].

Work in 8 books: 1) mathematical and physical premises - theories of Euclid, Archimedes, Menelaus, Pappus. Ibn al-Haytham (No 328, M12) and al-Kūhī (No 277), 2) construction of balances of Ibn Qurra (No 103, Me1) and al-Asfizārī (No 423, Me1); 3) premises to the theory of "balance of wisdom" - treatise of al-Bīrūnī(No 348, Me1), mathematical problems; 4-5) water balance - "balance of wisdom" - balances of Archimedes, Menelaus, al-Rāzī (No 142), Khayyām (No 420), al-Asfizārī (No 423); 6) applications of "balance of wisdom" for determining components of alloys, chapters from al-Bīrūnī's "Mineralogy" (No 348, Mi1); 7) balances of money changers; 8) "balance-clock".

477. HIZBALLAH AL-TARRALIBI

Abū Muḥammad Ḥizballāh ibn Khalaf ibn Sa`īd ibn Hudhayl al-Tarrālibī (12th c.), from Valencia; travelled to the East, was pupil in Alexandria; arithmetician, knew inheritance well.

See: MAA (122), MAMS (II 341); Ibn al-Abbār [1] (I 34).

478. `ABDALLAH AL-SIQILLI

Abū Muḥammad `Abdallāh ibn Abī'l-Qāsim ibn `Abdallāh ibn Muḥammad al-Ṣiqillī (12th c.), Sicilian astronomer.

See: GAL² (I 864), MAMS (II 341).

A1. Treatise on Horary Instrument for Defining the Time of Call to Prayer by Mu'adhdhin (Risāla fi'l-mukḥula li-ma`rifat awqāt al-ṣayḥa) - Beirut (Greek. 364/19). Edition: al-Siqilli [1]. Research: Wiedemann and Würschmidt [1]. Treatise on the types of sundials.

479. MUHAMMAD AL-MURADI

Abū'l-Ṭāhir Muḥammad ibn `Abd al-`Azīz ibn Yūsuf al-Murādī (12th c.), known by the name "Ibn al-Jiyāb", born in Seville, mathematician.

See: MAA (122), MAMS (II 341).

M1. Beginners Book on Approximation and Facilitation for the [Study] of the Art of Measuring Plane Figures (Kitāb al-taqrīb wa'l-taysīr li-ifādat al-mubtadī bi-ṣinā`at misāḥat al-suṭūḥ.) - Escorial (II 929). Description of the manuscript: Derenbourg [7] (38). Edition of the chapter on measures and weights used in Spain: Casiri [1] (I 364-367).

480. `ABD AL-RAHIM AL-SHAMUQI

`Abd al-Raḥīm al-Shamuqī (12th c.), from Murcia, teacher of al-Dabbī (No 513); scholar of Qur`anic studies, arithmetician, also knew philology well.

See: MAA (122-123), MAMS (II 342); al-Dabbī [1] (361).

481. AHMAD AL-ASWANI

Abū'l-Ḥusayn aḥmad ibn `Alī ibn Ibrāhīm al-Qāḍī al-Rashīd al-Aswānī (d. 1167), from Aswan, Egypt, judge (al-qāḍī al-rashīd = the righteous judge), worked in Alexandria; poet and geometer, knowledgeable in philosophy.

See: KWA (I 51), KWA² (I 143), MAA (123), MAMS (II 342).

482. `ABDALLAH IBN AL-KHASHSHAB

Abū Muḥammad `Abdallāh ibn Aḥmad ibn Aḥmad (1099-1172) was born, lived and died in Baghdad. He was known by the name "Ibn al-Khashshāb" (son of a timber merchant); scholar of Qur'anic studies, arithmetician, knowledgeable in inheritance.

See: KWA (I 267), KWA² (II 66), MAA (123), MAMS (II 342); Abu'l-Fidā [1] (III 645), Fleisch [2] (EI²).

483. MUHAMMAD AL-SABTI AL-LAKHMI

Abū ʿAbdallāh Muḥammad ibn Aḥmad Ibn Hishām al-Sabtī al-Lakhmī (d. 1174), from Ceuta, mathematician and grammarian.

See: GAL (I 375), GAL² (I 854, II 1022), KZ (II 628, IV 439, 445, 550, V 100, 308, 471), MAMS (II 342-343), SSM (136).

M1. Book on the Area of a Triangle Calculated by its Sides (Maqāla fī misāḥat al-muthallath min jihat aḍlāʿihī) - Beirut (223/4), Paris (483/4).

M2. Exposing the Error of Abu'l-Jud Muhammad ibn Abu'l-Layth in one of his two Premises on the Construction of the Heptagon (Waṣf tamwīh Abī'l-Jūd Muḥammad ibn Abī'l-Layth fī amr mā qaddamahu min al-muqaddimatayn li-ʿamal al-musabbaʿ) - Beirut (482/1). Critique of the work (No 342, M2), Abu'l-Layth.

A1. Commentary on Poem of Abū ʿAli ibn al-Haytham al-Baghdādī (Sharḥ qaṣīda Abī ʿAlī ibn al-Haytham al-Baghdādī) = Commentary on Poem [with Rhymes] on ʿAyn on Determining the Qibla, [Prayer] (times, and Ascensions (Sharḥ al-qaṣīda al-ʿayniyya fī maʿrifat al-Qibla wa'l-awqāt wa'l-ṭawāliʿ) - Fas (Zāwiya 14a), is mentioned in KZ (IV 550). Commentary on the work (No 328, A19), Ibn al-Haytham.

A2. [Commentary on Poem of Ibn al-Haytham on the Entry of the Sun into the Lunar Stations] - Cairo (mīqāt 1051). Commentary on the work (No 328, A20), Ibn al-Haytham.

484. ʿABDALLAH AL-MAʿADANI

ʿAbdallāh ibn Shākir ibn Abi'l-Muṭahhir al-Maʿadānī (d. ca 1175), lived and died in Isfahan, astrologer, geometer, and poet.

See: MAA (123), MAMS (II 343), TH (224); Pingree [35] (EIr).

485. HIBATALLAH AL-BALADI AL-BAGHDADI

Zayn al-Dīn Abū'l-Barakāt Hibatallāh ibn ʿAlī ibn Malkā al-Baladī al-Yahūdī al-Baghdādī (ca 1095-1175) born in Balad near Mosul; a Jew (al-yahūdī) who converted to Islam; he was known by the name "Awḥad al-Zamān" (Unicum of the Time); worked in Baghdad as the physician of Caliph al-Mustanjid (1160-1170); philosopher, astronomer, and naturalist.

See: GAL (I 602), GAL² (I 831), HD (394), HD² (259), IHS (II 382), KZ (V 620), MAA (123), MAA² (174), MAMS (II 343), STMI (283), UA (I 278-280); Houtsma [2] (EI) Pines [4], [7] (EI²), [8, 10, 12], [20] (DSB), [26-27], Schlesinger [1] (JE), Steinschneider [13] (182-186), Ülken [2].

E1. Important in Philosophy (al-Muʿtabar fī'l-ḥikma) - Cairo (I Sup. 35), Istanbul (Köprülü 919 - Part I , SM Esat 1931, Fatih 3224-3225 - Parts III and IV). Edition: al-Baghdādī [2]. German translation of chapters on natural science, movement, and vacuum: Rosenthal [6] (224-242). Research: Pines [3, 9, 11, 19, 24] of the problem of "moving force": Rozhanskaya [6] (155-157), of the theory of emanation: Nasrat [1]. Treatise in 4 parts: 1) logic, 2-3) physics, 4) metaphysics.

A1. Treatise on the Cause of the Appearance of Stars at Night and their Disappearance in the Day (Risāla fī sabab ẓuhūr al-kawākib laylan wa khafāhā nahāran) - Berlin (5671, 5671a), Hyderabad (riyāḍa 327), Mashhad (6012). German translation (incomplete): Wiedemann [110].

A2. Treatise on Operations with the Tympanum for [All] Horizons (Risāla fī'l-ʿamal bi'l-ṣafīḥa al-afāqiyya) - Niğde (Nat. 209/2).

PH1. Divine Sciences (Ilāhiyāt). Edition: al-Baghdādī [1].

486. ʿABDALLAH AL-DARIR

Abū Muḥammad ʿAbdallāh ibn Muḥammad ibn Sahl al-Ḍarīr (1096-1176), born in Granada, lived and died in Murcia; he was blind (al-ḍarīr); scholar of letters and mathematics, pupil of Ibn Bājja (No 436).

See: MAA (123-124), MAMS (II 344); Ibn al-Abbār [1] (II 484).

487. AL-SAMAW'AL AL-MAGHRIBI

Abū Naṣr al-Samaw'al ibn Yaḥyā ibn ʿAbbās al-Maghribī al-Andalusī (d. ca 1175), born in Baghdad (al-Samaw'al is the Arabic form of the name Samuel); son of Jewish poet Yehuda ben Abun from Fas (Yaḥyā ibn ʿAbbās al-Maghribī); pupil of Hibatallah al-Baghdādī (No 485), al-Shahrazūrī (No 474), and al-Daskarī (No

475); mathematician and physician, worked in Iraq, Syria, Kurdistan, and Azerbaijan; he spent his last years in Maragha, where he was converted to Islam in 1163.

See: GAL (I 643), GAL[2] (I 892), HD (408), HD[2] (268), HMA (II 12-17), IHS (II 401-402), KZ (III 63, V 20, 74, VI 322), MAA (124-125), MAMS (II 344-347), SSM (148), TH (209), UA (II 30); Anbuba [3] (DSB), Ahmad and Rashed [1], Berggren [10] (113-117), Harvey [4] (ENWC), Hirschfeld [1] (JE), Perlmann [2] (EJ), Rashed [4, 13a], Rosenfeld [17], Rosenthal [3], Steinschneider [13] (183-196), Tuqan [1] (381-382), Zirikli [1] (III 205).

M1. Selected Book on the Science of Arithmetic (al-Kitāb al-bāhir fī `ilm al-ḥisāb) - Cairo (riyāḍa 702/1 - selected chapters only), Istanbul (SM AS 2718, Esat 3155). Description of the Istanbul manuscripts: SHIM (487). Edition by Ahmad and Rashed: al-Samaw'al [5]. Research: Ahmad and Rashed [1], Dold-Samplonius [11], Rashed [4, 8], Rosenfeld [19], Shawky [6], Waterhouse [1].

Treatise in 4 books: 1) premises, 2) algebra, 3) irrational magnitudes, 4) classification of problems. In (1) after rules of multiplication and division of numbers and monomials the rules of multiplication and division of polynomials are exposed. Negative numbers defined by the word "illā" (without) are introduced. In (2) among many algebraic rules the binomial formula for $(x+y)^n$ - with reference on al-Karaji (No 309) - is formulated. In proof of these rules the (incomplete) mathematical induction is used. In (3) Euclid's theory of quadratic irrationals is exposed in arithmetical form. In (4) the "necessary", "possible', and "impossible" mathematical problems are defined.

M2. Concise Book on Arithmetic (al-Kitāb al-mūjaz al-Mawḍū `ī fī'l-ḥisāb) - Istanbul (SM Fatih 3439/15).

M3. Book on Hindu Reckoning for Qiwam al-Din (al-Kitāb al-Qiwāmī fī'l-ḥisāb al-hindī) = Book on the Science of Geometric Measurement (al-Kitāb fī `ilm al-misāḥa al-handasiyya) - Florence (238) - incomplete, under the first title. The second title is mentioned in TH and UA (perhaps, the title of the Florence manuscript is the title of a part of this work). Apparently the book is dedicated to Qiwām al-Dīn al-Shaybanī (No 511). It was written in 1173. Edition of chapters 5 and 6 of the Book V: Rashed [14] (238-243). Research: Rashed [14]. Arithmetic treatise containing exposition of extraction of roots of any power and operations with decimal fractions.

M4. Introduction to the Science of Arithmetic (al-Tabṣira fī `ilm al-ḥisāb) - Berlin (5962), Cairo (majlis 713/14), Florence (238), Milan (C 211/2), Oxford (I 966/1). Descriptions: of the Berlin manuscript - Ahlwardt [1] (327), general description - King [15] (408). Arithmetic treatise in 2 books: 1) Indian arithmetic of integers (by Indian figures), 2) sexagesimal arithmetic of fractions.

M5. Book of Inventions of Miracles in the Art of Numbers (al-Maṣḥaf al-mukhtara' fī mu`jizāt ṣinā`a al-`adad) - Cairo (riyāḍa 702/2).

M6. [Commentary on "Book of Proof of Operations of Two Errors" of Qusṭā ibn Lūqā] - Cairo (riyāḍa 702/3). Commentary on the work (No 118, M1) of Qusṭā ibn Lūqā.

M7. Selected [Book] on Algebra (al-Zāhir fī'l-jabr) - is mentioned in M1 (al-Samaw'al [5], 61).

M8. Treatise on Analysis and Synthesis (Risāla fī'l-taḥlīl wa'l-tarkīb) - is mentioned in M1 (al-Samaw'al [5], 74).

M9. Commentary on the Book of Diophantus of Alexandria (Sharḥ li kitāb Diyūfānṭus al-Iskandarānī) - is mentioned in M1 (al-Samaw`al [5], 251).

KZ (V 20, VI 193) mentions his following mathematical works:

M10. The Sufficient [Book] on the Calculus of Dirham and Dinar (al-Kāfī fī ḥisāb al-dirham wa'l-dīnār).

M11. Poem on Finger Reckoning (Manẓūmat ḥisāb al-yad). al-Safadi quoted in the book al-Samaw'al [5] (255), mentions the following mathematical works of al-Samaw'al:

M12. Treatise for Ibn Khashshab on Arithmetical Problems of Algebra and Almucabala (Risāla ilā Ibn Khashshāb fī masā'il ḥisābiyya jabr wa muqābala). Treatise is dedicated to Ibn Khashshāb (No 482).

M13. Book on the Eloquence of Geometers (Kitāb fī i`jāz al-muhandisīn).

M14. Book on Rectangular Triangle (Kitāb al-muthallath al-qā'im al-zāwiya).

A1. Book on Revelation of Defects of Astronomers and their Errors in the Majority of their Operations and Predictions (Kitāb fī kashf `awār al-munajjimīn wa ghalaṭihim fī akthar al-a`māl wa'l-aḥkām) - Leiden (98/1), Oxford (I 964). Description: GAS (VI 65-66).

Book in 25 chapters: 1) introduction, 2-3) errors in determining altitudes by means of astrolabe and shadows, 4) errors in determining sin 1°, 5) astronomical instruments, 6) errors in calendars, 7) errors in interpolation of tables (critique of al-Bīrūnī), 8-10) errors in determining time, 11) errors in determining ascensions, 12) errors in operations with rays, 13) errors in determining latitudes, 14) errors in calculations of direction, 15-16) errors in determining the horizon and heights of mountains, 17) errors in determining positions of fixed stars, 18-24) errors in astrological problems, 25) enumeration on kinds of deduction.

A2. Book of Education in the Science of Stars (Kitāb al-tahdhīb fī ṣinā`at al-nujūm) - Dublin (Beatty 4067).

Ph1. Book of Rostrum on Measuring Mixed Substances for Determining an Unknown (Kitāb al-minbar fī misāḥat al-jawāhir al-mukhtaliṭa li istikhrāj majhūlihā) - is mentioned in TH.

PH1. Silencing the Jews (Ifḥām ṭāifat al-yahūd). Edition with English translation by Perlmann: al-Samaw'al [4] (translation - al-Samaw'al [4], 33-73). Latin translation by Alfonso Buenombre (Alfonsus Bonihominis) written in 1339, where the extolment of Islam was replaced by the extolment of Christianity: al-Samaw'al [1], English and Russian translations from this translation: al-Samaw'al [2- 3]. This work is a religious treatise written after al-Samaw'al converted to Islam. Research: Perlmann [1]. Alfonso Buenombre (Alfonsus Bonihominis) made a Latin translation of this work in 1339, giving the author's name as "Samuel of Morocco". At the time al-Samaw'al was very popular in Medieval Europe. This Alfonso is often identified with Alfonso de Valladolid (IHS, III 417-419). He was initially Abner of Burgos and converted to Christianity. He is the author of polemical treatises against Judaism; physician and astronomer, prepared calendars; also author of mathematical treatise "Rectificator of Curved" (Meyyashsher `aq"v) (edition and Russian translation by Gluskina: Alfonso [1]).

H1. [Samaw'al ibn Yaḥyā al-Maghribī's Convertion to Islam] - English translation by Perlmann: al-Samaw'al [4] (75-88). Autobiography of Samaw'al and the history of his conversion to Islam after the Prophet had appeared to him; November 8, 1163.

488. NASHWAN AL-HIMYARI

Nashwān ibn Sa`īd ibn Salāma al-Ḥimyarī (d. 1177), Yemeni poet, historian, grammarian and astronomer.

See: GAL (I 364), GAL² (I 527-528), MAY (21-22), SSM (131).

A1. Poem on Greek Months (Urjūza fī'l-shuhūr al-Rūmiyya) - Cairo (majlis 705/3).

489. RASHID AL-DIN AL-WATWAT

Rashīd al-Dīn Abū Bakr Aḥmad ibn Isḥāq ibn `Abd al-Jalīl al-`Umarī al-Waṭwāṭ (d. 1182), (Waṭwaṭ = bat); born in Balkh, died in Khwarizm; poet and scholar, worked at the court of Khwarizmshah Atsyz (1127-1156).

See: GAL (I 325), GAL² (I 486), KZ (I 145, 453, II 230, III 21, 77, 117, IV 239, 318, 391, 422, V 605), MAMS (II 347-348), PL (III 176-178), PL² (782); al-Bayhaqī [1] (166-168), Browne [3] (II 333), Wensinck [1] (EI).

M1. Treatise on the Science of Latitudes (Risāla fī `ilm al-`urūḍ) - Istanbul (SM AS 2616/2). The contents of this treatise probably coincide with the "theory of latitudes of forms" of Nicole Oresme (1328-1382), see IHS (III 1486-1488)

A1. Twenty Chapters on the Construction of the Astrolabe (Bīst bāb fī`amal al-asṭurlāb) P - Istanbul (SM AS 2616/1).

L1. Gardens of Magic on Subtleties of Poetry (Ḥadāiq al-siḥr fī daqāiq al-shi`r). Edition by Iqbal: al-Waṭwāṭ [1]. Russian translation and research by Chalisova: Chalisova [1], al-Waṭwāṭ [2].

490. `ALI AL-BAKRI

`Alī ibn Muḥammad Sharīf al-Bakrī al-Mawṣilī al-Munajjim (12th c.), from Mosul, astronomer and astrologer (al-munajjim = astrologer).

See: KZ (II 46), MAMS (II 348), PL (48-49), SSM (148).

A1. Proof of Sufficient (Burhān al-kifāya) = Sufficient Proof of Predictions of Stars (Burhān al-kifāya fī aḥkām al-nujūm) P - Bombay [Firuz 12, 42-43], Cairo (lughat 4657 - a fragment), Calcutta (Curz. 643), Hyderabad (riyāḍa 36, 68), Istanbul (SM Esat 1971), Kabul (Arch. 211, Matb. 107), London (10037; Ind. 2270), Manchester (Lind. 968), St. Petersburg (Nat. Khan. 130-131; Univ. 111), Tabriz (Adab. 329/4), Tehran (2125-2127; Dihkhuda 228; Ma`arif II 330, 1195; Mahdawi 255; Malik 1737, 3383; Milli 993-994; Sipahsalar 648; Univ. 500, 1914/1, 3060, Huquq 91, 292, Ilah. 11, 181/2). Turkish translation by Subhi-zade (No 1292): Cairo (Ṭal`at falak turkī 41).

491. MUHAMMAD AFDAL AL-DAWLA

Abū'l-Majd Muḥammad ibn Abī'l-Ḥākim `Ubaydallāh ibn al-Muẓaffar Afḍal al-Dawla (d. 1179); he was knowledgeable in medicine, geometry, astrology, and music. Son of `Ubaydallāh ibn al- Bāhilī (No 464).

See: MAA (125), MAMS (II 348), UA (II 155).

492. KHALAF IBN BASHKUWAL

Abu'l-Qāsim Khalaf ibn `Abd al-Malik ibn Mas`ud Ibn Bashkuwāl al-Qurṭubī (1101-1183), from Cordoba, was a judge in Seville, died in Cordoba. Bashkuwāl is the Arabic form of the Spanish name "Pascual"; historian.

See: GAL (I 415), GAL^2 (I 580), KWA (II 204), MAMS (II 348-349); Ben Cheneb [5] (EI), Ben Sheneb and Miranda [1] (EI^2), Ibn al-Abbār [1] (I 64-58), [2] (82-85), Singer [1] (LM).

HS1. Book of Gift on Information on Distinguished Men of Andalusia (Kitāb al-ṣila fī akhbār a'immat al-Andalus) - Escorial (II 1677). Edition by Codera: Ibn Bashkuwāl [1].

493. MUWAFFAQ AL-DIN AL-RAHBI

Muwaffaq al-Dīn Abū `Abdallāh Muḥammad ibn `Alī ibn Muḥammad ibn al-Ḥusayn al-Raḥbī al- Mutaqqina (d. 1183), knew inheritance well.

See: GAL (I 490-491), MAMS (II 349), SSM (97).

M1. Poem of al-Raḥbī (al-Urjūza al-Raḥbiyya) = His Aim (Wealth) in Investigating all that is Related to Inheritance (on Science on Heirs and Inheritance) (Bughya (Ghunya) al-bāḥith `an jumal al-mawārīth (fī `ilm al-wārith wa'l-farāiḍ) - Alexandria (Fun. 92/1, 146/5, 149/6), Algiers (596/5, 1325), Berlin (4691-4692), Gotha (1111-1112), Cairo (I 553), London (Sup. 195, 1234A), Rabat (543/7), Rampur (I 261/46), Tübingen (218). Edition: al-Raḥbī [1]. Poem in 180 verses on inheritance.

494. MUHAMMAD IBN TUFAYL

Abū Bakr Muḥammad ibn `Abd al-Malik ibn Muḥammad ibn Muḥammad ibn Ṭufayl al-Qaysī (ca 1100-1185) was born in Wādī āsh (now Guadix), Andalusia; came from the Arab tribe Qays; pupil of Ibn Bājja (No 436) and teacher of Ibn Rushd (No 512); philosopher, physician, mathematician, and astronomer. He lived his last years in Morocco and died in Marrakesh. In medieval Europe he was known as "Abubacar" and "Abentophal".

See: GAL (I 602-603), GAL^2 (I 831-832), HMA (II113-114), IHS (II 354-355), MAA (125, 218), MAMS (II 349-350), PI (IV 56-65); Adnan [8] (IA), Anawati [5] (LM), Ye. Belyayev [1], de Boer [4] (160-165), Carra de Vaux [19] (EI, EI^2), Farrukh [5], Gauthier [1-1a], S. Grigorian [2], Harvey [2] (ENWÇ), Haurani [3] (DSB), Ignatenko [7] (185-204), Mieli [2] (188), Quadri [2] (165-172), Radev [1] (194-207), Tuqan (388-303), Ueberweg [1] (312-313).

A1. [Astronomical Treatise] - is mentioned by al-Biṭrūjī (No 526) who informs that in this treatise the hypotheses of Ptolemy are replaced by new hypotheses, see Munk [1] (VI 907).

PH1. Hayy ibn Yaqzan (Ḥayy ibn Yaqẓān). Edition: Ibn Ṭufayl [3], Latin translation: Ibn Ṭufayl [1]. English translation by Ockley: Ibn Ṭufayl [1a]. French translation by Gauthier: Ibn Ṭufayl [2], Russian translations by Kuz'min: Ibn Ṭufayl [4], by Saghadeyev: Ibn Ṭufayl [5]. Research: Saghadeyev [9, 12], Mallet [2].

495. MUHHAMAD AL-WADIASHI

Abu'l-Qāsim Muḥammad ibn `Alī ibn Muḥammad al-Wādi'āshī al-Barrāq (d. 1199), born in Wādī āsh, Andalusia; astronomer and knowledgeable in many sciences.

See: MAMS (II 350).

E1. Collecting Sciences and Suppressing Doubts (Jāmi` al-funūn wa-qāmi` al-ẓunūn) - Manuscript of Part IX entitled "Smart Treatise on the Science of Astronomy" (Risāla laṭīfa fī `ilm al-hay'a) - Berlin (5672).

496. MUHAMMAD AL-IRBILI

Muwaffaq al-Dīn Abū `Abdallāh Muḥammad ibn Yūsuf ibn Muḥammad al-Irbīlī al-Baḥrānī (d. 1189), born in Bahrain, worked in Shahrazur, Damascus, and Irbil; linguist, poet, and geometer, knowledgeable in sciences of the ancients.

See: GAS (V 110-111), KWA (II 31), KWA^2 (III 172), MAA (125), MAMS (II 350); Abu'l-Fida [1] (IV 103), Zirikli [1] (VIII 23).

M1. Resolution [of Difficulties] of the Book of Euclid (Ḥall kitāb Uqlīdis) - is mentioned in KWA.

497. SHIHAB AL-DIN AL-SUHRAWARDI

Shihāb al-Dīn Abu'l-Futūḥ Yaḥyā ibn Ḥabash ibn Amīrak al-Suhrawardī (1154-1191), born in Suhraward near Sultaniyya, Jibal; studied in Maragha, worked in Baghdad and Aleppo. Philosopher, founder of "philosophy of illumination" containing elements of ancient religious doctrines, the philosophy of Aristotle, and various directions of Islam, particularly Sufism. He was executed for heresy. For this reason he was called "al-Maqtūl" (slain) after his death.

See: GAL (I 564-566), GAL² (I 781-783), IHS (II 361-362), KZ (I 421, 425, II 219, 419, III 102, 647, IV 236, 310, V 209, 330, 524, 591, 604, VI 505), MAMS (II 350-351); Agahi [1] (FE), Horten [5], Nasr [2], Razavi [1], Ritter [4], S. Van den Bergh [1], [2] (EI), [4] (IA).

E1. Book of Comments (Kitāb al-talwīḥāt) - Berlin (5062), Cairo (Taymūr 119-120, 130 - physics and philosophy), Hyderabad (II 1996/19), Patna (263-264), Kazan (1227 - physics), Rampur (I 395), Tehran (Zanjānī VI 93). Encyclopaedia written analogously to the "Second Doctrine" of al-Fārābī (No 180, E1) and "Book of Healing" of Ibn Sīnā (No 317, E1), contains chapters on mathematics, astronomy, and physics.

PH1. Philosophy of Illumination (Ḥikmat al-ishrāq). Edition: al-Suhrawardī [1], Latin translation: Suhrawardi [2]. Abridged German translation: Horten [5]. Research: Amin-zade [1] (FE), Carra de Vaux [12], Nasrat (theory of emanation). Fundamental philosophical work of al-Suhrawardī containing principles of his doctrine.

498. MUHADHDHAB AL-DIN IBN AL-BURHAN

Abū Naṣr Muhadhdhab al-Dīn Muḥammad ibn Muḥammad ibn Ibrāhīm ibn al-Khiḍr ibn al-Burhān (12-13th c.), from Tabaristan, reckoner and astrologer, worked in Aleppo.

See: KWA (II 255), KWA² (IV 138), MAA (195), MAMS (II 351).

499. `ABD AL-MALIK AL-SHIRAZI

Abū'l-Ḥusayn `Abd al-Malik ibn Muḥammad al-Shīrāzī (d. ca 1200) from Shiraz, mathematician and astronomer.

See: GAL² (I 858), IHS (379), MAA (125-126), MAMS (II 351); Pingree [29] (EIr), Schoy [35] (EI), [37] (IA).

M1. Science of Propositions on Conic Sections, the Noblest Section and the Highest Targets of the Science of Geometry (`Ilm ashkāl quṭu` al-makhrūṭāt wa ashraf al-manāzil wa a`lā al-marātib min `ilm al-handasa) = Book of Revision of "Conic Sections" (Kitāb taṣaffuḥ al-Makhrūṭāt) - Istanbul (NO 2972; SM Carullah 1507, Yeni Cami 803; TK 3463), Leiden (513), Oxford (I 913/1, 987/1, 988); the Leiden and two last Oxford manuscripts contain only Books V-VII. Edition of Toomer with English translation: `A. al-Shīrāzī [1]. Research: Nix [1]. Revision of "Conic Sections" of Apollonius in Arabic translation by al-Ḥimṣī (No 84) (Books I-IV) and Ibn Qurra (No 103) (Books V-VII).

A1. [Revision of "Almagest"] - only Persian translation by Quṭb al-Dīn al-Shīrāzī (No 668) is extant.

500. MUHAMMAD IBN TUMART AL-ANDALUSI

Abū `Abdallāh Muḥammad ibn 'Alī ibn Tūmart al-Andalusī (12th c.), from Spain, philosopher.

See: GAL (I 506-507), GAL² (I 697), SSM (136-137); Hopkins (EI²).

E1. Treasure of Science and Threaded Pearls on Truths of the Science of Sharī`at and Subtleties of the Science of Nature (Kanz al-`ulūm wa'l-durr al-manẓūm fī ḥaqāiq `ilm al-sharī`a wa daqāiq `ilm al-ṭabī`a) - Cairo (falsafa 411, tabī`iyat 124/1, Halim majlis 47/1). Encyclopaedical treatise in 5 chapters containing one chapter on astronomy.

501. `ABD AL-HAQQ IBN SAB`IN

Abū Muḥammad `Abd al-Ḥaqq ibn Ibrāhīm ibn Sab`īn (12th c.), philosopher, astronomer, and astrologer.

See: GAL (I 465, 611), GAL² (I 844, II 1017), MAMS (III 9), SSM (137); Anonymous [3] (EI), Faure (EI²).

A1. Assignment of Possibility (Tamkīn) - Gotha (1379/3).

A2. Book of Degrees (Kitāb al-Daraj) - Cairo (Fāḍil majlis 202/2). Astrological treatise.

A3. Language of Celestial Spheres Telling Kinds of Truth (Lisān al-falak al-nāṭiq `alā wajh al-ḥaqā'iq) - Damascus (9467).

502. SHARAF AL-DIN AL-AMUNI

Sharaf al-Dīn Maḥmūd ibn Qāyid al-Amūnī (12th c.), from Mecca, mathematician.
See: MAA (126), MAMS (II 352).
M1. On Geometry and Indian Figures (Fi'l-handasa wa'l-raqm al-hindī) - Florence (309). Treatise was written in 1172.

503. MUHAMMAD AL-GHAFIQI

Abu'l-Walīd Muḥammad ibn al-Ḥusayn ibn Zayd al-Ghāfiqī (d. 1192), from Granada; arithmetician.
See: MAA (126), MAMS (II 352); Casiri [1] (II 91).

504. `ALI AL-FARGHANI AL-MARGHINANI

`Alī al-Farghanī al-Marghinanī (d. 1193), theologian and scholar-encyclopaedist.
See: GAL (I 466-469), GAL² (644-649).
E1. Information on Guarantee in Problems of Guidance (Wiqāyat al-riwāya fī masāil al-hidāya). Commentary on this work: (No 706, E3) of al-Bukhari. Islamic encyclopaedia containing mathematical and astronomical chapters related to prayer times and building of mosques.

505. MUBASHSHIR AL-RAZI

Abu'l-Rashīd Mubashshir ibn Aḥmad ibn `Alī ibn `Umar al-Rāzī al-Ḥāsib "Ibn al-Rashīd" (1136-1193), born in Baghdad, his family came from Rayy; arithmetician and astronomer, knowledgeable in algebra and inheritance.
See: KZ (IV 397), MAA (126), MAMS (II 352); Tuqan [1] (374).
M1. Inheritance of Ibn al-Rashīd (Farāiḍ Ibn al-Rashīd) - is mentioned in KZ.

506. FAKHR AL-DIN IBN AL-DAHHAN

Fakhr al-Dīn Abū Shujā` Muḥammad ibn `Alī ibn Shu`ayb ibn al-Dahhān al-Baghdādī (d. 1194), born in Baghdad, son of an oil merchant (al-dahhān), jurist, mathematician, and astronomer, worked in Mosul, Irbil, and Damascus under Ayyubid Sultan Ṣalāḥ al-Dīn (1185-1195).
See: GAL 491-492), IHS (II 462), KWA (II 24), KWA² (III 175), KZ (II 102, IV 326), MAA (126-127), MAMS (II 352), UA (II 182).
E1. Table to View Questions that Show Disagreements (Taqwīm al-naẓar fi'l-masāil al-khilāfiyya) - Cairo (III 209), Paris (788-789). Tables with 10 colons: 1) question, 2-9) answers from viewpoints of various schools, 10) commentaries; written in 1167.
A1. Zīj (al-Zīj) - is mentioned in UA.

507. MUHAMMAD AL-TARASUSI

Abu `āmir Muḥammad ibn Aḥmad ibn al-Ṭarasūsī al-Balawī al-Ṣālimī (d. 1164), philosopher, worked in Seville.
See: GAL (II 658), GAL² (II 914), MAMS (II 353).
E1. Specimen of Sciences (Unmūdhaj al-`ulūm) - Princeton (Brill 284, Garr. 1129a), St. Petersburg (B 1366), Vienne (3, 2318). Encyclopaedia in 24 books.

508. MUHAMMAD IBN UMAYYA

Abū `Abdallāh Muḥammad ibn Umayya (d. 1195), from Baesa, Spain; arithmetician.
See: MAA (127), MAMS (II 353); Ibn al-Abbār [1] (I 285).

509. YAHYA AL-BAYASI

Amīn al-Dīn Abū Zakarīyā Yaḥyā ibn Ismā`īl al-Andalusī al-Bayāsī (12th c.), born in Baesa, Spain, worked in Cairo and Damascus; physician at the court of Sultan Ṣalāḥ al-Dīn, mathematician, knowledgeable in medicine; constructor of measuring instruments.

See: MAA (127), MAMS (II 353), UA (II 163).

510. KA`B AL-`AMIL

Ka`b al-`Amil al-Ḥāsib (d. 1197), born and lived in Baghdad, arithmetician (al-ḥāsib = reckoner).
See: MAA (127), MAMS (II 353), TH (267); Tuqan [1] (373).

511. QIWAM AL-DIN AL-SHAYBANI

Qiwām al-Dīn Abū Ṭālib Yaḥyā ibn Sa`īd ibn Hibatallāh al-Shaybānī (d. 1198), born and lived in Baghdad; respected official; arithmetician, he was knowledgeable in law.
See: KWA (II 252), KWA² (IV 129), MAA (127), MAMS (II 353).

512. MUHAMMAD IBN RUSHD

Abū'l-Walīd Muḥammad ibn Aḥmad ibn Muḥammad Ḥafīd ibn Rushd (1126-1198), born in Cordoba, was judge in Seville and Cordoba. Moved to Morocco towards the end of his life and died there; scholar-encyclopaedist, philosopher, jurist, physician, and mathematician. In medieval Europe he was known as "Averroes".
See: HMA (II 97-109), IHS (II 355-361), KZ (I 246, II 474, III 92, 100, IV 423, V 75, 142, 235), MAA (127-128), MAA² (174), MAMS (II 353-355), PI (IV 65-83), STMI (473-474, 500), UA (II 75); Alonso [2], Anawati, Hödl a. o. [1] (LM), al-`Aqqad [2], Arnaldez [3] (EI²), Arnaldez and Iskandar [1], "Averroes, Maimonide" [1], de Boer [4] (119-132), Bogoutdinov and Trakhtenberg [1] (FE), Carra de Vaux [18] (EI), Christ [1], Cruz Hernandez [2-3], G. Gabrieli [4], Gauthier [2, 3], S. Grigorian [2], Fahri [1], Farmer [4] (43), al-Halu [1], Hana [3], (GWG), Horten [6, 9], Ignatenko [7] (205-230), Iskander [1], (DSB), [6] (ENWC), Krafft [1] (GWG), Latham [1] (EI²), Leaman [3], Ley [2] (118-177), Martin [2] (GAC), Mieli [2] (190-192), Mohammed [1], M. Müller [1], Pines, Suler, and Munther [1], Quadri [2] (198-340), Renan [1], Sabra [30], Saghadeyev [3-4, 10], Ueberweg [1] (313-322), Ülken [6] (IA), Urvoy [1, 2, 3], Van den Bergh [3], Wolfson [1].
M1. Propositions to be added to Spherics for True and not Approximate Understanding of "Almagest" (al-Ashkāl allatī yajibu an tuḍāfa ilā'l-ukar ḥattā yufhamu al-Majisṭī `alā'l-ḥaqīqa min ghayr taqrīb) - Paris (2458/6).
A1. [Treatise Concerning the Substance of the Celestial Sphere] - English translation based on medieval Latin translation: Ibn Rushd [22]. Research: Carmody [3].
A2. Abridged "Almagest" (Mukhtaṣar al-Majisṭī). Only medieval Hebrew translations are extant. Research of these manuscripts: Lay [1], Steinschneider [11a] (54).
PH1. Refutation of the Refutation (Tahāfut al-tahāfut) - the answer to the book "Refutation of Philosophers" of al-Ghazzālī (No 415, PH1). Editions: Ibn Rushd [4, 9]. English translation by Van den Bergh: Ibn Rushd [15]. Russian translation (incomplete) by Rubin and Saghadeyev: Ibn Rushd [19]. Research: de Boer [1].
PH2. [Commentary on Aristotle] - Hyderabad (falsafa 597). Editions: Ibn Rushd [14]. Edition of the commentaries on "Metaphysics" by Bouyges: Ibn Rushd [12]. Edition of the short commentaries on "Topics", Rhetoric", and "Poetics" with English translation by Butterworth: Ibn Rushd [26]. French translation of the book A of "Metaphysics" by Martin: Ibn Rushd [29]. English translations of the middle commentaries on "Categories", "On Interpretation" and "Poetics" by Butterworth: Ibn Rushd [27, 30], Latin translation of commentary on "Meteorologics": Ibn Rushd [3]. English translation of "Metaphysics" by Genequand: Ibn Rushd [28]. English translation of the chapter on mover of natural movement: Grant [2] (263-264) in Commentary on "Physics". Research: (general) - Carmody [6], on Commentary on "First Analytics": Elamrani-Jamal [1], on Commentaries on "The Soul": Ivry [2], Twetten [1] - on the chapter on prime mover in Commentary on "Physics".
PH3. Commentary on Aristotle's "On the Heavens " (Sharḥ kitāb Arisṭuṭālis fī'l-samā' wa'l-`ālam) - Tunis (Nat. 11821). Facsimile edition of the manuscript: Ibn Rushd [33]. Research: Endress [6].
PH4. Book on Resolution on What is in Harmony between Sharī`at and Philosophy (Faṣl al-maqāl fī mā bayna al-sharī`a wa'l-ḥikma). Editions: Ibn Rushd [5, 17], M. Müller [1] (3-21), with French translation by Gauthier: Ibn Rushd [11]. English translation by Hourani: Ibn Rushd [18]. French translation by Gauthier: Ibn Rushd [32]. Russian translation by Saghadeyev: Ibn Rushd [24]. Edition and French translation by Geoffroy: Ibn Rushd [34]. Research: Batsiyeva [5].
PH5. Appendix (Dhamīma) - Appendix to "Metaphysics" of Aristotle. Edition: Ibn Rushd [5, 17]. Edition with French translation by Gauthier: Ibn Rushd [11]. German translation by Van den Bergh: Ibn Rushd [8].
PH6. [The Epitome to "On the Heavens" of Aristotle]. Research: Hugonnard-Roche [1].

PH7. Book of Opening the Channels of Argumentation of the Dogmas of the Religious Community and Explanation of the Doubts and Perplexity about Falsity and Heresy (Kitāb al-kashf `an manāhij al-adilla fī `aqāid al-milla bi-ḥasb al-ta'wīl min al-shubah al-muzayyafa wa'l-bida` al-muḍilla). Editions: Ibn Rushd [5, 17], M. Muller [1] (27-127), with English translation by Hourani: Ibn Rushd [18].

PH8. [Commentary on Plato's "Republic"]. Edition by E. Rosenthal: Ibn Rushd [16]. Edition with English translation by E. Rosenthal: Ibn Rushd [23]. English translation by Lerner: Ibn Rushd [25].

ME1: Complete Book on Medicine (Kitāb al-kullīyāt fī'l-ṭibb). Edition: [31]. Latin translations entitled "Colliget" (Latin transcription of "Kullīyāt") - Ibn Rushd [1-2]. Facsimile edition of the manuscript with *research in Spanish: Ibn Rushd [10]. Research: Torres [1]. Important medical encyclopaedia in 7 books: 1)* Anatomy, 2) Health, 3) Sickness 4) Symptoms, 5) Medicines, 6) Hygiene, 7) Therapy. Sarton's opinion that Ibn Rushd "understood the function of the retina" (IHS, II 356) is wrong, this function in sight was first understood by Felix Platter (1536-1614).

ME2. [Commentary on the Medical Poem of Ibn Sīnā]. Latin translation by Armeagand Blessi: Ibn Sīnā [1]. Commentary on the poem (No 317, ME2) of Ibn Sīnā.

513. AHMAD AL-DABBI

Abū Ja`far Aḥmad ibn Yaḥyā ibn Aḥmad ibn `Amīra al-Dabbī al-Qurṭubī (d. ca 1200), born in Velesa, Spain; lived in Murcia and Cordoba, historian.

See: *GAL (I 415-416), IHS (II 444), MAMS (II 355); al-Maqqarī [1] (I 714), Seybold [4] (EI), [6] (IA).*

HS1. Aims of those who are Anxious to know the History of the Learned Men of Andalusia (Bughyat al-multamis fī ta'rīkh rijāl ahl al-Andalus) - Escorial (II 1676). Edition by Codera and Ribera: al-Ḍabbī [1].

514. TAHIR AL-HALABI

Majd al-Dīn Ṭāhir ibn Naṣrallāh ibn Jahīl al-Ḥalabī (1136-1200), from Aleppo, taught at madrasa Ṣalāḥiyya in Jerusalem.

See: MAA (128), MAMS (II 355).

515. AHMAD IBN AL-HAJIB

Muhadhdhab al-Dīn Aḥmad ibn al-Ḥājib (d. ca 1200), born in Damascus, pupil of Sharaf al-Dīn al-Ṭūsī (No 541); physician and mathematician, knowledgeable in philosophy; worked with al-Dahhān (No 506) in Tus and Irbil, also in Damascus.

See: MAA (128-129), MAMS (II 355), UA (II 181- 182).

516. HUSAYN AL-HURMUZDI

Ḥusayn ibn Mūsā al-Hurmuzdī al-Ḥāsib (second half of 12th c.), from Hurmuzd, astronomer.

See: GAL[2] (I 866), MAMS (II 355-356).

A1. Zīj Shastka (Zīj al-Shastka, Zīj-i Shastgāh) P - Mashhad 5535, 5558), Tehran (Mahdawi 281/2; Univ. Adab. 359/2). *Description of one of the Mashhad manuscripts: SIAT (130).*

517. NAJIB HAMADHANI

Najīb Hamadhānī (end of 12th c.), from Hamadhan, naturalist.

See: MAMS (II 356), PL (II 121-122).

AG1. Marvels of Creations and Rarities of the Extant (`Ajāib al-makhlūqāt wa gharā'ib al-mawjūdāt) P - Berlin (344-344a), Calcutta (Buhar 97), Cambridge (6), Gotha (35), Oxford (405), Paris (814), St. Petersburg (A 453, D 129), Vienna (1446). Description of the Gotha manuscript: Pertsch [1] (58-61). Description of the St. Petersburg manuscripts: Miklukho-Maclay [3] (22-29). Research: Demidchik [1], Mal'tsev [1-3], Miklukho-Maclay [2-3]. The name of the author was established by Miklukho-Maclay; Mal'tsev in [1] calls the author *Najib Hamadhani, in [2] - Aḥmad Ṭūsī (No 518), in [3] believes that this treatise is anonymous.*

Work in 10 parts: 1) marvels of the Heaven (angels, spirits, and celestial spheres, the Sun, the Moon and the planets), 2) marvels which happen between the Heaven and the Earth (fire, meteors, lightning and thunder, rainbow, air, winds, and clouds), 3) marvellous lands, mountains, rivers, and seas, 4) marvellous countries and cities, 5) marvellous plants, 6) marvellous images, talismans, buried treasures, tombs of famous kings and

prophets, 7) marvellous men and peoples, psychology, alchemy, and medicine, 8) marvellous ghosts and diabolic creatures, 9) marvellous birds and insects, 10) marvellous beasts and reptiles and demons.

518. MUHAMMAD AL-TUSI

Muḥammad ibn Maḥmūd ibn Aḥmad al-Ṭūsī (12th c.), from Tus, geographer, he was often called "Aḥmad Ṭūsī".
See: AGL (323-325), IHS (II 413), KZ (IV 188), MAMS (II 357).

AG1. Marvels of Creations and Rarities of the Extant (`Ajāib al-makhlūqāt wa gharāib al-mawjūdāt) P. Edition by Satuda: M. b. M. al- Ṭūsī [1]. Research: Demidchik [1], Mal'tsev [1-3]. Work nearly coinciding with (No 517, AG1) of Najīb Hamadhānī; explaining the hesitation in Mal'tsev's papers [1-3] on (No 517, AG1) and (No 518, AG1). Since in both these works Hamadhānī is described considerably in more detail than Ṭūsī; the former is more original than the latter.

519. AL-HASAN AL-FARISI

Ẓāhīr al-Dīn Abū `Alī al-Ḥasan ibn al-Khaṭīr al-Nu`mān al-Fārisī (d. 1202), worked in Cairo; jurist, arithmetician, astronomer, knowledgeable in medicine, philology, and history.
See: MAA (129), KZ (I 195, 371, II 381, 426, 621); al-Suyūṭī [1] (I 172).

A1. Aims of those who are Interested in Operations with the Astrolabe (Maqāṣid dhawī al-albāb fi'l-`amal bi'l-asṭurlāb) - Cairo (Kavala mīqāt 2/1).

520. MUHAMMAD AL-HARITHI

Mu'ayyid al-Dīn Abū'l-Faḍl Muḥammad ibn `Abd`al-Karīm ibn `Abd al-Raḥmān al-Ḥārithī al-Muhandis (d. 1203), born in Damascus, worked in Damascus as carpenter, stone-cutter, mechanician (al-muhandis = geometer or mechanician), and physician; in mathematics he was the pupil of Sharaf al-Din al-Ṭūsī (No 541). He improved the clock of the Great Mosque in Damascus.
See: MAA (129-130), MAMS (II 357), UA (II 190-191); Tuqan [1] (375-376).
UA mentions his astronomical works:

A1. Zīj (al-Zīj).

A2. Treatise on the Knowledge of Calendar Symbols (Risāla fī ma`-rifat ramz al-taqwīm).

A3. Treatise on Visibility of the Crescent (Risāla fī ru'yat al-hilāl).

521. MUHAMMAD IBN AL-YASAMIN

Abū Muḥammad `Abdallāh ibn Muḥammad ibn Ḥajjāj ibn al-Yāsamīn al-Adrinī al-Ishbīlī (d. 1204), from Fas Berbers, worked in Seville and Fas at the court of Sultan of Morocco; was killed in Morocco.
See: GAL (I 621), GAL² (I 858), IHS (II 400), KZ (I 246), MAA (130), MAA² (174), MAA³ (172), MAMS (II 358), SSM (136); Ibn al-Abbār [1] (II 531), Djebbar [8] (ENWC), Tuqan [1] (377), Zemouli [3].

M1. Poem of al-Yasmini on Algebra and Almucabala (al-Urjūza (Manẓūma) al-Yāsamīniyya fi'l-jabr wa'l-muqābala) - Algiers (376/8), Berlin (5963-5969), Cairo (falak 4001/3, 8522/3, 18362/2, majlis 703/6, riyāḍa 112/1, 4, 360/1, 817/3, 898/2, Taymūr majlis 82/10, 289/1, riyāḍa 138/3, 147/2; Rauda Hairi 5/6), Escorial (II 954/2). Gotha (1475, 1491/1), Istanbul (SM AS 61/2), London (Sup. 1205/2), Paris (4151/6), Princeton (Yehuda 4401), Rabat (2424), Tangier, Vienna (1507/3). Description of the Gotha manuscripts: Pertsch [3] (104, 116-117). Description of the Escorial manuscript: Derenbourg [7] (85). Research: al-Khumsi [1], Zemouli [2]. Exposition of algebra in 58 verses.

M2. Poem on Roots (Urjūza fi'l-judhūr) = Poem Containing Operations with Roots (Urjūza mushtamila `alā a`māl al-judhūr) - Cairo (riyāḍa 112/1, Taymur majlis 86/9, riyāḍa 138/3), Escorial (II 954/6), Istanbul (SM AS 2761/3). Description of the Escorial manuscript: Derenbourg [7] (66). Research: Zemouli [1].

M3. Correction of Opinions on the Science [of Arithmetic] by Means of Figures (Tanqīh al-afkār fi'l-`ilm bi-rusūm al-ghubār) - Alexandria (hisab 6).

522. `ALI AL-QAYSI

`Alī ibn Muḥammad ibn Farḥūn al-Qaysī (d. 1205), from Cordoba, worked in Fas; arithmetician, knowledgeable in inheritance; died during pilgrimage to Mecca.

See: MAA (130), MAMS (II 358); Ibn al-Abbār [1] (II 675).

523. AHMAD AL-KHAZRAJI

Abu'l-'Abbās Aḥmad ibn Mas'ūd ibn Muḥammad al-Khazrajī (d. 1205), from Cordoba, scholar of Qur'anic studies, knowledgeable in law, philology, inheritance, and medicine; he was also a poet.
See: MAA (130), MAMS (II 358); al-Maqqarī [1] (II 5).

524. AL-HASAN AL-UMAWI

Abū 'Alī al-Ḥasan ibn 'Alī ibn Khalaf al-Umawī (1120-1206), born in Cordoba, lived and died in Seville; scholar of Qur'anic studies, astronomer and astrologer; knowledgeable in philology and philosophy.
See: MAA (131), MAMS (II 359); Ibn al-Abbār [1] (I 20).
A1. Book on Calculation of Months (Kitāb ḥisāb al-shuhūr) - Escorial (I 936).

525. JA' FAR AL-QATTA'

Ja'far al-Qaṭṭā ' al-Sadīd al-Baghdādī (d. 1206), born, lived and died in Baghdad; geometer, knowledgeable in logic and inheritance.
See: MAA (131), MAMS (II 359), TH (157).

526. NUR AL-DIN AL- BITRUJI

Abū Isḥāq Nūr al-Dīn al-Biṭrūjī al-Ishbīlī (12-13th c.), born in Pedroche near Cordoba, pupil of Ibn Tufayl (No 494), astronomer, worked in Seville. In medieval Europe he was known by the name "Alpetragius".
See: GAL² (I 866), IHS (II 399-400), MAA (131), MAA² (174), MAA³ (172), MAMS (II 359), PI (II 230-236); Baldi [1] (528-534), Delambre [1] (171-175), Kennedy [29], Mieli [2] (197), E. Rosen [1], Samsó [9] (DSB), [30] (ENWC], Tuqan [1] (403), Vernet [3] (EI²),
A1. Book of Astronomy (Kitāb al-hay'a) = Shivering in Astronomy Book (Kitāb al-murta'ish fi'l-hay'a) - Escorial (II 963 - under the first title), Istanbul (TK 3302/1 - under the second title). Description of the Escorial manuscript: Derenbourg [7] (101-102). Description of the Istanbul manuscript: SHIM (488-489). Latin translations - by Kalonimos ben David (1529) from Hebrew translation by Moses Ibn Tibbon (1259) - al-Biṭrūjī [1], by Scott (1217) - al-Biṭrūjī [2] (70-150). Edition of the Arabic and Hebrew texts with English translation by Goldstein: al-Biṭrūjī [3]. Research: Avi-Jonas [1], Carmody [1-2], by Goldstein: al-Biṭrūjī [3], Cortabarria [2], Kennedy [32], Sabra [30].

527. SIRAJ AL-DIN AL-SAJAWANDI

Sirāj al-Dīn Abū Ṭāhir Muḥammad ibn Muḥammad ibn 'Abd al-Rashīd al-Sajāwandī (12-13th c.), from Sajawand, Khurasan, worked in Central Asia; arithmetician, knowledgeable in law and inheritance.
See: GAL (I 470-471), GAL² (I 650-651), KZ (I 248, II 207, 562, III 325, 376, 384, 482, IV 399), MAA (192), MAMS (II 360), SSM (148-149); J. Ibadov [4, 7], Matviyevskaya and Tllashev [6] (16-17, 83-85), Sellheim [1] (EI²).
M1. Treatise on Arithmetic (Risāla-yi ḥisāb) P - Dushanbe (2128/3), Samarkand (823908/1).
M2. Book on Reduction of the Common Denominator in Arithmetic (Kitāb al-tajnīs fi'l-ḥisāb) - Dublin (3511/2), Paris (2330/12), St. Petersburg (C 1216, 1330/13, 1417/25), Tashkent (5185/10, 6023/7, 6131/5, 6425/4), Vienna (1440/6). Description of the Tashkent manuscript 6131/5: SVR (XI). Book in 13 chapters on arithmetic operations with fractions.
M3. Eight Questions in Arithmetic (Masāil thamāniya fi'l-ḥisāb) = Conclusive Treatise (al-Risāla al-burhāniyya) - Samarkand (1187140/3), Tashkent (5930/1, 6425/9).
M4. Arithmetic (Ḥisāb) - Dushanbe (2121/6), Samarkand (1008469).
M5. Treatise on Algebra and Almucabala (Risālat al-jabr wa'l-muqābala) - Moscow (Andronov), Tashkent (5185/5, 5513/7, 6023/8, 6425/4; SADUM 43/1), is quoted in KZ (II 384). Research: A. Q. Qadyrov [2].
M6. Important Principles for Problems of Algebra and Almucabala (Uṣūl yusta'ānu bihā fi masā'il al-jabr wa'l-muqābala) - Cairo ('ulum 23447/7), Istanbul (NO 2547/1-2).
M7. Explanation of the Area of the Rhomboid (Sharḥ misāḥat shabīh al-mu'ayyin) - Moscow (Andropov)

M8. Book on Inheritance of Siraj al-Din (Kitāb al-farā'iḍ al-sirājiyya). Numerous manuscripts (list of the Tashkent manuscripts: Matviyevskaya [3]). Edition: al-Sajāwandī [1]. English translation by Kumár Sen and Jones: al-Sajāwandī [2- 3]. Research of mathematical problems according to the Moscow manuscript of Andronov and Dushanbe manuscript 2638: Qadyrov [1-3].

528. JAMAL AL-DIN IBN AL-MAYLI

Jamāl al-Dīn Abū Ḥafṣ `Umar ibn Ḥussān ibn al-Maylī (12-13th c.), mathematician.

See: GAL (I 622), MAA (195-196), MAMS (II 360).

M1. Rescuer of the Perishing and Support of the Traveller (Munqidh al-hālik wa `umdat al-sālik) - Leiden (1511). Exposition of arithmetic and geometry according to Euclid, Nicomachus, and the work (No 309, M1) of al-Karajī.

529. ABU MUTI' AL-BALKHI

Abū'l-Muayyad Abū Muṭī' al-Balkhī (12-13th c.), from Balkh, geographer and traveller, lived under Ildigizid Atabegs of Azerbaijan.

See: PL (II 123-124)

G1. Marvels of the World (`Ajāib al-dunyā) P - Oxford (Browne 11/12), St. Petersburg. Description of the St. Petersburg manuscript: Miklukho-Maclay [3].

530. AHMAD IBN AL-KAMMAD

Abū'l-`Abbās Aḥmad ibn Jūsuf ibn al-Kammād (or ibn Ḥammād) al-Andalusī (12-13th c.), from Spain or Maghrib, astronomer and astrologer.

See: GAL² (I 864), IHS (III 1514-1515), KZ (III 556-557, V 263, VI 66), MAA (196), MAMS (II 360-361), SSM (136).

A1. Circular Movement, Eternal Limit (al-Kawr `alā'l-dawr, al-Amad `alā'l-abad) = Borrowed Zīj (Zīj al-muqtabis) - Oxford (II 285/1) included in (No 531, A1) of al-Ghāfiqī. Research: Chabás and Goldstein [1], Comes [1], Mancha [2]. Astronomical tables composed according to observations of al-Zarqālī (No 402).

531 `ABD AL-HAQQ IBN AL-HAIM AL-GHAFIQI.

`Abd al-Haqq ibn al-Hā'im al-Ghāfiqī (12-13th c.), astronomer.

See: MAMS (III 9); Samsó [31] (ENWC).

A1. Perfect Zīj in Mathematics (al-Zīj al-kāmil fī'l-ta`ālīm) - Oxford (II 285/1). Edition, English translation and research of the section on trepidation model: Comes [4]. Research: `Abd al-Rahman [1], Calvo [10-11], Puig, R. [7]. The Zīj was written in (ca 1205).

532. MUHAMMAD AL-HASSAR

Abū Zakarīyā Muḥammad ibn `Abdallāh ibn `Ayyāsh al-Ḥaṣṣār (12-13th c.), (ḥaṣṣār= mat-maker); Western Arab mathematician, forerunner of Ibn al-Bannā (No 696).

See: GAL² (II 156), IHS (II 400), MAA (197-198), MAMS (II 361).

M1. Book of al-Hassar on the Science of Ghubar (Kitāb al-Ḥaṣṣār fī `ilm al-ghubār) - Gotha (1489), Istanbul (SM Carullah 1509/4), Rome (Vat. 396). Description of the Gotha manuscript: Pertsch [3] (114-115). Partial German translation and research: Suter [8].

M2. The Perfect [Book] (al-Kāmil). Research: Aballagh and Djebbar [1].

533. MUHAMMAD AL-HAMDANI

Abū `Abdallāh Muḥammad ibn Aḥmad ibn `Abdallāh ibn Sa`d al-Hamdānī (1118-1208) from Aljesiras, Spain; arithmetician, knowledgeable in inheritance.

See: MAA (131), MAMS (II 361); Ibn al-Abbār [1] (I 290).

534. MOSES MAIMONIDES

Moses Maimonides = Abū 'Imrān Mūsā ibn Maymūn al-Qurṭubī = Rabbi Moshe ben Maymon, Rambam (1135-1204); famous Jewish philosopher, born in Cordoba. He moved to Cairo in 1165, where he worked as a physician at the court of Ayyubid Sultan Salah al-Dīn (Saladin) (1169-1193) and his son 'Imād al-Dīn (1193-1198); he wrote in Arabic.

See: GAL (I 644-646), GAL² (I 893-894), GAS (V 141), HMA (II57-64). IHS (II 369-380), MAA (131-132), MAA² (174), MAMS (II 361-362); Adnan [7] (IA), "Averroes, Maimonide" [1], Beer [1], Belen'kiy [1], Benisch [1], Broidé and Lauterbach [1] (JE), Cohen [1], Farmer [4] (43-44), Goldschmidt [1] (GWG), Hayoun [1], Ivry [1], Langermann [1], [5] (ENWC), L. G. Levi [1], Llamas [1], Macht [1], A. Marx [1], Mayoun [1], Meyerhof [3], Meyerhof and Schacht [1], Mittwoch [1] (EI), Neugebauer [1], Orian [1], Pines [17, 21], [24] (DSB), [29], J. Puig [1], Twersky [1], Ueberweg [1] (329-321), Vajda [3] (EI²), Vernet [36], Yellin and Abrahams [1], Zeitlin [1].

Memorial collections: "Maimonides" [1-2]. Collection of the works: Maimonides [4].

M1. Notes on Some Propositions of the Book "Conic Sections" (Ḥawāshī 'alā ba'ḍ ashkāl kitāb al-Makhrūṭāt) - Manisa (1706/6). Research: Rashed [27]. Commentary on "Conic Sections" of Apollonius.

PH1. Guide of the Perplexed (Dalālat al-ḥāirīn). Edition (Arabic by Hebrew letters) with French translation by Munk: Maimonides [1], re-edition of the translation by Munk: Maimonides [8]. Arabic edition by Atay: Maimonides [9], German translation by Altmann: Maimonides [3]. English translations by Friedländer: Maimonides [5], by Pines: Maimonides [8]. Numerous editions of Hebrew translations by Ibn Tibbon. Russian translation of chapters 71-76 of Part I by Rubin: S. Grigorian [3] (267-325). Research: Freudenthal [1], Gandz, Obermann, and Neugebauer [1], Lévy [1], Steinschneider [12].
Philosophical treatise in 3 parts: 1) Introduction and 76 chapters (chapters 71-76 - on the doctrine of mutakallims headed by al-Ash'arī (No 158), and in particular on atomistic structure of space and time). 2) Introduction and 24 chapters (in the introduction critique of Aristotle's philosophy from religious viewpoint, and the modification of the Aristotle's system reconcilable with religion, in chapter 24 critique of astronomical system of Ptolemy from Aristotle's viewpoint and exposition of the astronomical treatise (No 436, A1) of Ibn Bājja). 3) Introduction and 54 chapters.

PH2. Book on the Art of Logic (Maqāla fī ṣinā'at al-manṭiq). Edition with 3 medieval Hebrew translations and with English translation by Efros: Maimonides [4].

PH3. Philosophical Treatises: in Hebrew; French translation by de Hulster: Maimonides [10].

ME1. Book on Poisons (Kitāb al-sumūm). French translation by Rabinovich: Maimonides [2].

535. FAKHR AL-DIN AL-RAZI

Fakhr al-Dīn Abū 'Abdallāh Muḥammad ibn 'Umar ibn al-Ḥusayn ibn al-Khaṭīb al-Rāzī (1150-1209), born in Rayy, worked in Rayy and Herat; scholar-encyclopaedist, author of many philosophical, historical, astrological, theological, and mystic treatises.

See: GAL (I 666-669), GAL² (I 920-924), HD (455), HD² (298), HMA (II 20-22), IHS (II 364), KWA (I 474), KWA² (II 658), KZ (I 6-8, 60, 172, 204, 242, 253, 280, 301, 350-351, 465, 498, II 17, 48, 80, 170, 216, 248, 298, 337-338, 354, 364, 367, 373, 425, 478, 560, 628, III 19, 177, 186, 202, 236, 415, 430, 434, 596, 602, IV 27, 163, 212, 290, 312, 497-499, V 129, 165, 267-269, 330, 348, 358, 422-426, 527, 563, 592, 612-613, 622, VI 4, 38, 98, 112, 149-150, 190, 261, 377, 393, 402, 427), MAA (132-133), MAMS (II 362-364), PL (II 49-51, 351-353, 459, 490, 496), SSM (149), STMI (603), TH (263), UA (II 23), STMI (471-472); Abu'l-Fida [1] (IV 239), Anawati [3] (EI²), Boltayev [1] (186-224), Browne [3] (II 484-485), Farmer [4] (44), G. Gabrieli [7], Khalif [1], Kramers [5] (IA), Naimov [1-2], Tuqan [1] (378-379),

E1. Collection of Sciences (Jāmi' al-'ulūm) = Collections of Sciences (Jawāmi' al-'ulūm) = Book of Sixty (Kitāb al-sittīn). Arabic version: Hyderabad (II 1766/85), Istanbul (SM AS 3832, 3760), Tehran (415/1, 5514), Persian version: Calcutta (Sup. 3308; Madrasa 140), Hyderabad (falsafa 27, mutaf. 77, 85, 358; Salar majlis, 'ulumi), Leiden (16), London (Sup. 142-143), Manchester (Lind. 736), Lahore (Univ.), Paris (722, 2350), St. Petersburg (C 612), Tashkent (55/6, 415/1, 2671, 2796). Description of the Tashkent manuscript: SVR (III 413). Edition: Fakhr al-Dīn al-Rāzī [1b]. Research: Wiedemann [49]. Book in 60 chapters containing exposition of 40 sciences, including mathematics, written for Khwarizmshah 'Ala al-Din Muhammad (1200-1220).

E2. Gardens of Radiances of the Truth of Mysteries (Ḥadāiq al-anwār fī ḥaqāiq al-asrār) P - Berlin (92-93), Bombay (73), Cairo (riyāḍa 897/4 - geometric chapter), Calcutta (1359, Buhar 216), Leiden (17, 513 - geometric chapter), Heidelberg (134), London (7589, Sup. 143), Oxford (1481/2, 1482), Paris (213, 2350),

Patna (Sup. 2193 - extracts), Tashkent (2671). Description of the Tashkent manuscript: SVR (III 413-414). Description of the Paris manuscript 2350 - Blochet [2] (IV 292-294). Edition with German translation and research of the chapter on arithmetic: S. Brentjes [6]. Exposition of 60 sciences, including mathematics, extension of E1, written for Khwarizmshah `Alā' al-Dīn Muḥammad.

E3. Results of the Thoughts of Ancient and Late Scientists, Sage Men, and Mutakallims (Muḥaṣṣal afkār al-mutaqaddimīn wa'l-muta'akhkhirīn min al-`ulamā wa'l-ḥukamā wa'l-mutakallimīn) = Results of the Limit of Reason in the Science of Principles (al-Muḥaṣṣal min nihāyat al-`uqūl fī `ilm al-uṣūl) - Cairo (I 257, VI 105; Taymur 268), Escorial (II 650/5), Hyderabad (II 1210/21-22), Mashhad (I 281-282), Milan (A 79/1). Edition: Fakhr al-Dīn al-Rāzī [2]. Research: general - Horten [3], problems of optics - Wiedemann [51]. Encyclopaedical treatise containing chapters on philosophy and various sciences.

E4. Treatise for Kamāl al-Din on Divine Truths (al-Risāla al-Kamāliyya fi'l-ḥaqāiq al-ilāhiyya) - Mashhad (952). Encyclopaedical treatise in 10 books containing chapters on philosophy and (various sciences.

E5. Commentary on the "Book of Salvation" (Sharḥ Kitab al-najāt) - Calcutta (Buhar 316). Commentary on the work (No 317, E2) by Ibn Sīnā.

M1. Commentary on Introductions [to the Books] of Euclid (Sharḥ muṣādarāt Uqlīdis) - is mentioned in TH. Commentary on introductions to books of "Elements".

M2. Book on Geometry (Kitāb fi'l-handasa) - is meantioned in TH.

A1. The Hidden Mystery of Stars (al-Sirr al-maktūm fī mukhāṭabat al-nujūm) - Aleppo (Ahmad. 1341), Cairo (lughat 4349/5, Taymūr ghayb. 129), Florence (319), Istanbul (Köprülü 925; NO 2792; SM AS 2796, Aşir 925, Carullah 1480-1482, Damat 845/1; TK 3218, 3256), Leiden (910, 986), London (9147), Manchester (Lind. 265), Oxford (I 917, 950, 981, 1016, II 282/2, 2389), Patna (2062/3, 2648/6), Princeton (933), Tashkent (3847). Persian translations: Paris (897, 2399), St. Petersburg (B 856), Tashkent (2687). Turkish translation by Muḥammad Efendi: Cairo (mīqāt turki 1/1). Description of the Tashkent manuscript: SVR (V 226). Edition: Fakhr al-Dīn al-Rāzī [1a].

A2. Selected Book for `Ala al-Din on Celestial Choice (al-Ikhtiyārāt al-`Alā'iyya) P - Cairo (Tal`at mīqāt 240/3 - a fragment). Astrological treatise.

A3. Explanation of al-Razi on Duration (Sharḥ Rāzī li'l-maqāma) - Cairo (mīqāt 126/1a). Treatise on durations of the planets in the zodiacal signs.

A4. [Poem on the Visibility of Mercury] - Cairo (Fāḍil mīqāt 248/1).

PH1. Book of Eastern Researches (Kitāb al-mabāḥith al-mashriqiyya). Editions: Fakhr al-Dīn al-Rāzī [5, 8]. Revision of the work (No 317, PH11) of Ibn Sīnā.

PH2. Commentary on "Indications" (Sharḥ al-Ishārāt). Edition: Fakhr al-Dīn al-Rāzī [1]. Commentary on the work (No 317, PH1) of Ibn Sīnā.

PH3. Core of "Indications" (Lubāb al-Ishārāt). Edition: Fakhr al-Dīn al-Rāzī [4]. Revision of the same work (No 317, PH4) of Ibn Sīnā.

PH4. Commentary on "Sources of Wisdom" (Sharḥ Uyūn al-ḥikma) - Calcutta (Buhar 317). Commentary on the work (No 317, PH8) of Ibn Sīnā.

PH5. Theological Treatises: a) Enlightening Explanations of Names and Properties [of Allah] (Lawāmi` al-bayyināt fi'l-asmā' wa'l-ṣifāt) - edition: Fakhr al-Dīn al-Rāzī [3], b) Book of Forty [Chapters] on Principles of Faith (Kitāb al-arba`īn fī uṣūl al-dīn) - edition: Fakhr al-Dīn al-Rāzī [6], c) Foundations of Sanctity in the Science of Kalam (Asās al-taqdīs fī `ilm al-kalām) - edition: Fakhr al-Dīn al-Rāzī [7]. Research: Horten [7].

536. `ABDALLAH AL-QUDA`I

Abū Muḥammad `Abdallāh ibn Idrīs ibn Muḥammad ibn `Alī al-Quḍā`ī (d. 1210), was known by the name "Ibn Shaqq al-Layl" (son of midnight); pupil of Ibn Bashkuwāl (No 492) in Granada, worked in Valencia, arithmetician.

See: MAA (133), MAMS (II 364); Ibn al-Abbār [1] (II 504).

537. MUHAMMAD IBN AL-KATIB

Abū `Abdallāh Muḥammad ibn `Abd al-Raḥmān (d. 1220) from Granada, was known by the name "Ibn al-Kātib" (son of a scribe); architect and mathematician.

See: MAA (133), MAMS (II 364); Casiri [1] (II 91), Tuqan [1] (394).

538. AHMAD AL-KHATIRI

Abū Ḥāmid ibn Muḥammad ibn Abū Ṭālib al-Malaṭī al-Khāṭirī (12-13th c.), from Malatya (Turkey) (ancient Melitene), mathematician.

See: GAL (I 622), GAL^2 (II 1019), MAMS (II 365).

M1. Proof of Wisdom (Bayān al-ḥikma) - Princeton (Garr. 1054). Description of the manuscript: Hitti, Faris, and Abd al-Malik [1] (331-332).

539. MUHAMMAD AL-SHANTIYALI

Abū `Abdallāh Muḥammad ibn Aḥmad ibn Khalaf ibn `Ayyāsh al-Anṣārī al-Khazrajī al-Shantiyālī (1140-1213) from Santa Ella near Cordoba, pupil of Ibn Bashkuwāl (No 492), worked in Cordoba; arithmetician, knew law and inheritance well.

See: MAA (133), MAMS (II365); Ibn al-Abbār [1] (I 301).

540. MUHAMMAD IBN YARBU`

Abū `Abdallāh Muḥammad ibn Aḥmad ibn Yarbū` (d. 1213), from Jaen, Spain, worked in Jaen and other cities of Spain, scholar of Qur'anic studies, arithmetician, also knowledgeable in philology.

See: MAA (133), MAMS (II 365); Casiri [1] (II 125), Ibn al-Abbār [1] (I 307).

541. SHARAF AL-DIN AL-TUSI

Sharaf al-Dīn al-Muẓaffar ibn Muḥammad al-Ṭūsī (d. 1213), from Tus, worked in Hamadhan, mathematician and astronomer, teacher of Kamāl al-Dīn Mūsā ibn Yūnis (No 576).

See: GAL (I 622), GAL^2 (I 858-859), GAS (V 399), IHS (II 622-623), KWA (II 133, 185), KWA^2 (III 470, 481), KZ (VI 386), MA (170-171), MAA (134), MAMS (II 365-367), SSM (149); Anbuba [4] (DSB), Hogendijk [36] (ENWC), Rashed [16, 26], Tuqan [1] (406).

M1. Problems of Algebra and Almucabala (Masāil al-jabr wa'l-muqābala) = Treatise on Equations (Risāla <fi>'l-mu`ādalāt) - manuscript of an abridged revision (talkhīṣ wa tahdhīb) - London (Ind. 767/3). Edition and French translation: Sh. al-Ṭūsī [1].

Research: Amir-Moèz and Chavoshi [1], Berggren [12], Hogendijk [19], Houzel [2-3], Krasnova and Tagi-zade [1], Parès [1], Rashed [9]. Exposition of an approximate solution of cubic equation near solutions of Viète and Newton and a generalization of the extraction of cubic roots in the works of Ibn Labbān (No 308, M1) and al-Nasawī (No 341, M1). The existence of real roots, both geometric (similar to work (No 420, M2) of Khayyām) and algebraic,

M2. A Geometric Problem (Mas'ala handasiyya) - Cairo (riyāḍa 898/18), Leiden (14/17), New York (Columb. Smith 47). The treatise was written in Hamadan in 1209 as answer to the question of the head of the famous madrasa Niẓāmiyya at Baghdad. Research: Rashed [16], Suter [17] (33-36).

M3. Treatise on two Lines which Approach but do not Meet (Risāla fi'l-khaṭṭayn alladhayn yaqrubān wa lā yaltaqiyān) - Istanbul (SM AS 2646/2). Description of the manuscript: SHIM (490). Russian translation by Krasnova: Krasnova and Tagi-zade [1] (65-71). Proof that the product of distances from a point of an equilateral hyperbola to asymptotes is constant, that is, that equation of this hyperbola referred to asymptotes is ($xy = const$).

A1. Book on the Knowledge of the Plane Astrolabe and its Operations (Kitāb fī ma`rifat al-asṭurlāb al-musaṭṭaḥ wa'l-`amal bihī) - Istanbul (TK 3505/2), Leiden (591/1).

A2. Treatise on the Linear Astrolabe (Risāla fi'l-asṭurlāb al-khaṭṭī) - Istanbul (TK 3342/7, 3464/9), London (5479/3). Research: Carra de Vaux [5] (according to the exposition of al-Marrākushī in (No 592, A1), Michel [1] (115-122), [2], Tagi-zade and Vahabov [1] (198-202). Treatise in 2 parts: 1) construction of the astrolabe, 2) operations with it. Linear astrolabe, "stick of al-Ṭūsī" (`aṣā al-Ṭūsī) is a graduate ruler on which some points of a meridian and other diameters of the regular astrolabe are marked. Three threads are fastened to this ruler and one of them has a load at its end.

Mt1. Treatise on Celestial Traces (Risāla fi'l-āthār al-`ulwiyya) - is quoted in (No 674, Ph1) by al-Fārisī [1] (II 270).

542. MUHAMMAD AL-SALAMI

Abū Bakr Muḥammad ibn Sulaymān ibn `Abd al-`Azīz al-Salamī (d. 1215) from Jativa, Spain, was judge in Elcha; arithmetician, geometer, and knowledgeable in literature and inheritance.

See: MAA (134), MAMS (II 367); Casiri [1] (II 125), Ibn al-Abbār [1] (I 309)

543. `ALI AL-HARAWI

Abu'l-Ḥasan `Alī ibn Abī Bakr al-Harawī (d. 1215), from Herat, mechanician.

See: MAMS (II 367); Pingree [41] (EIr).

Me1. Memorandum of al-Harawi on Military Mechanics (al-Tadhkira al-Harawiyya fī ḥiyal al-ḥarbiyya) - Konya (Yusuf 5009).

544. `ABD AL-MALIK AL-SHIDHUNI

Abū Muḥammad `Abd al-Malik al-Shidhūnī (d. ca 1220) from Seville; physician and astronomer; knew philosophy well.

See: MAA (134), MAMS (II 368), UA (II 79).

545. MUHABB AL-DIN AL-`UKBARI

Muḥabb al-Dīn Abu'l-Baqā `Abdallāh ibn al-Ḥusayn ibn `Abdallāh al-`Ukbarī (d. 1219), born, lived and died in Baghdad, came from Ukbara on Tigris, he was blind; grammarian, arithmetician, knowledgeable in law and inheritance.

See: KWA (1266), KWA² (II 65), KZ (I 276, 308, 328, 353, 357, 513, II 65, 185, 281, 323, 371, 415, 418, 484, III 115, 159, 311, IV 240, 444, V 100. 293, 301, 333, 560, VI 38, 61, 115, 327), MAA (134-135), MAMS (II 368); Abū'l-Fidā [1] (IV 285), Siddyqov [2, 4-5, 7-8].

M1. Exhaustion of Arithmetic (al-Istī`āb fi'l-ḥisāb) - is mentioned in KZ (I 276).

M2. Concise Exposition of Inheritance (Talkhīṣ al-farāiḍ) - is mentioned in KZ (II 415).

546. `ALI IBN KHALIFA

Rashīd al-Dīn Abu'l-Ḥasan `Alī ibn Khalīfa ibn Yūnis (1183-1219), from Aleppo, worked in Damascus, physician-ophtalmologist, mathematician and astrologer, pupil of `Alam al-Dīn al-Ḥanafī (No 583), uncle of Ibn Abī Uṣaybi`a (No 601).

See: MAA (135), MAMS (II 368), UA (II 246-259).

M1. Useful Concise Book on the Science of Arithmetic (al-Kitāb al-mūjaz al-mufīd fī `ilm al-ḥisāb) - is mentioned in UA. Treatise in 4 books, written in 1211 for al-Malik al-Amjad, ruler of Ba`lbak.

M2. Book of Measurement (Kitāb al-misāḥa) - is mentioned in UA.

547. MAHMUD AL-JAGHMINI

Maḥmud ibn Muḥammad ibn `Umar al-Jaghmīnī or al-Chaghmīnī (died in 1221 during the Mongol conquest of Khwarizm), born in Jaghmin (Chaghmin), Khwarizm; mathematician and astronomer. GAL and MAA wrongly believe that he died in 1344-1345.

See: GAL (I 624-625), GAL² (I 865), IHS (III 699-700), KZ (II 601, IV 495, VI 113), MAA (164-165), MAA² (177), MAA³ (173), MAMS (II 368-370), PL (II 50-51), SSM (150), STMI (330); A. Abdullayev [4], Arzumetov [1], Hasanov [7] (150-152), Sharipov [10], Siddyqov [2-4, 7-8], Suter [6], [29] (EI), Suter and Vernet [2] (EI²).

M1. Concise Treatise on Arithmetic (Risāla mukhtaṣara fi'l-ḥisāb) - Cairo (Ṭal`at majlis 635/35), Princeton (Garr. 1032).

M2. [Treatise on Spherical Trigonometry] - Baku (B 503).

Description: Siddyqov [9] (187-195).

A1. Compendium of Astronomy (al-Mulakhkhaṣ fi'l-hay`a) - Algiers (451/5), Aligarh (Azad 73), Baghdad (2975-2979), Baku (B 503/2), Berlin (5673-5674), Bombay (180), Bratislava (191), Cairo (hay'a 6, 10/1, 3, 22, 27/1, 68/1, 69; Fadil hay'a 5-6, majlis 163/3; Ṭal`at majlis 966/2; Taymūr riyāḍa 347/3), Cambridge (1342/2, Sup. 1243-1244), Damascus (6868, 19529), Dushanbe (IZA 202/1), Hyderabad (riyāḍa 67), Istanbul (SM

Fatih 3515). Laleli 2141/2 – old number 1246-, Yeni Madrasa 228, Leiden (234/1), London (1343/2, 6572), Mahachqala (178, 356/2), Manchester (Lind. 322/1), Mashhad (166, 183), Milan (274-275), Moscow (178), Oxford (II 290/5), Paris (1114/1, 2330/7, 2500/1, 2502/1), Patna (2059), Princeton (Yehuda 373, 3559, 4438, 4453), Kazan (1824), St. Petersburg (A 645/3; Nat. 133/1; Univ. 90/1), Tashkent (7761/3, 8796/11, 10417, 11599/3), Tehran (3059/1; Muza 4330/1; Mu`tamid 115/3), Yerevan (180).
Persian translation: Oxford (1524). Description of the Istanbul manuscript: SHIM (509-510). Photo-reproduction of a page from the Cairo manuscript: SSM (226). German translation: Rudloff and Hochheim [1] (218-271). Russian translation by Siddyqov (of fragments) - al-Jaghmīnī [1]. Research: Atagarryyev [5-7] (application of stereographical projection for determining the azimuth of Qibla), general research: Atagarryyev [8], Nallino [11], Pashayev [2], Rudlow and Hochheim [1], Suter [5]. Book contains an "introduction" on simple and complicate bodies and on celestial spheres and 2 books: 1) astronomy, 2) geography, chronology, trigonometry, and astrology. Treatise was finished in 1220.

A2. Explanation of Commentary on "Compendium of Astronomy" (Tashrīḥ sharḥ al-Mulakhkhaṣ fi'l-hay'a) - Aligarh (Azad Sul. 179/39). Author's commentary on A1.

A3. [A Treatise on Planetary Distances and Sizes, dedicated to al-Imam Badr al-Dīn al-Falasitī] - Cairo (Ṭal`at majlis 429/2).

548. MUHAMMAD AL-`ATTAR AL-IS`IRDI

Muḥammad ibn al-Ḥasan ibn Ibrāhīm al-`Aṭṭār al-Is`irdī (12-13th c.), came from a family of perfumers (al-aṭṭār = parfumer); mathematician, worked in Hisn al-Kayf and Amid, Diyarbakır (Turkey).
See: GAS (V 355, VII 411), MAMS (II 258-259).
MAA, MAMS, and GAS V regarded al-Is`irdī as a scholar of 11th c., who worked in Ghazna. The time of his life and the place where he lived was established by Sezgin (GAS VII) who found that the work M2, which was earlier regarded as anonymous - see MAMS (III 51) - was written by him and dedicated to Artuqid Amīr Maḥmūd.

M1. Concise [Book] on Arithmetic (Mukhtaṣār fi'l-ḥisāb) - Istanbul (SM AS 4857/8)

M2. Book for Minds on Arithmetic (Kitāb al-lubāb fi'l-ḥisāb) - Oxford (I 941/10). The treatise is dedicated to Artuqid Amīr Naṣīr al-Dīn Maḥmud ibn Nūr al-Dīn Muḥammad ibn Fakhr al-Dīn Qara-Arslān ibn Artuq (1201-1222).

549. MUHAMMAD AL-`ABADI

Muḥammad Baraka al-`Abādī (13th c.), mathematician.
See: GAS (V 111, 113), MAMS (II 370).

M1. Exposition of Euclid (Taḥrīr Uqlīdis) - Cairo (Azhar VI 159). Edition: al-`Abadī [1]. Treatise was written in 1248.

M2. Commentary on Exposition of Euclid's "Elements" (Sharḥ Taḥrīr Uṣūl Uqlādis) - Rampur (I 415/44). Commentary on M1.

550. MUHAMMAD IBN MUBASHSHIR AL-BAGHDADI

Muḥammad ibn Mubashshir ibn Abī'l-Futūḥ al-Baghdādī (d. 1221), lived and died in Baghdad, worked at the court of amir Abū Naṣr Muḥammad, son of Caliph al-Nāṣir (1180-1225) who later became Caliph al-Ẓāhir (1225-1226); geometer, astrologer, also knew philosophy well.
See: MAA (135), MAMS (II 370), TH (289); Tuqan [1] (402).

551. MUHAMMAD BAKRAN

Muḥammad ibn Najīb Bakrān (beginning of 13th c.), geographer, worked in Khurasan. In 1208 he made the world-map with 600 points described in G1 for Khwarizmshah `Alā' al-Dīn Muḥammad (1193-1200).
See: AGL (325-326), MAMS (II 370), PL (II 123).

G1. Book of the World (Jihān-nāma) P - Paris (2041), St. Petersburg (C 612/1). Edition: Bakran [1], Russian translation of chapter III: Borshchevsky [1] (17). Research: Borshchevsky [1]. Book in 20 chapters dedicated to Khwarizmshah.

552. MUHAMMAD AL-FAHRI

Abū `Abdallāh Muḥammad ibn Bakr ibn Muḥammad ibn `Abd al-Raḥmān al-Fahrī (d. 1221), from Valencia; arithmetician, knowledgeable in medicine and history.

See: MAA (135), MAMS (II 371); Ibn al-Abbār [1] (I 322).

553. `ABDALLAH AL-JAMMA`ILI

Abū Muḥammad `Abdallāh ibn Aḥmad ibn Muḥammad al-Jammā`īlī al-Dimashqī (1147-1223), born in Jamma`il near Nablus, Palestine; studied in Baghdad; grammarian, astronomer, astrologer, arithmetician, also knew inheritance well.

See: MAA (135-136), MAMS (II 371); al-Kutubi [1] (I 260).

554. AHMAD AL-BUNI

Muḥyī (Taqī) al-Dīn Abū'l-`Abbās Aḥmad ibn `Alī al-Būnī al-Qurashī (d. 1225), born in Cairo, worked in Bone, Algeria, died in Cairo; famous for his knowledge of magic.

See: GAL (I 655-656), GAL[2] (I 910-911), IHS (II 595-596), KZ (I 279, 281, 346, II 305, 368, 440, 463, III 51, 180, 194, 376, 387, 394, 415, 436, 451, IV 24, 44, 75, 248, 440, 503, V 74, 128, 313, 316, 337, 561, 603, VI 235, 242, 496), MAA (136), MAA[2] (174). MAMS (II 371), SSM (136); Carra de Vaux [14] (EI).

A1. Treatise on Predictions of Zodiacal Signs and Stars and Knowledge of the Beginning of Years (Risāla fī aḥkām al-burūj wa'l-kawākib wa ma`rifat awāil al-sinīn) - Cairo (ḥurūf 84).

My1. The Sun of Knowledge and Subtleties of Information (Shams al-ma`ārif wa laṭā'if al-`awārif) - Alexandria (ḥurūf 5, 15), Berlin (4125), Cairo (I 327), Escorial (II 925, 944/1, 979, 981/1, 982), Gotha (1265), Hyderabad (I 269/3), Istanbul (SM AS 2798-2802, 2804-2806, Kılıç 692, Selim. 528), Kiyev (810), London (Sup. 284/2), Mosul (235/145), Paris (2647/9, 2650/5, 6557), Patna (859, 1344), Qayrawan (75), Rabat (469), Rampur (690/13), Rome (Vat. Sbath 370), St. Petersburg (A 259, B 3702, 3773, C 927, 693), Tashkent (6891, 6896, 7288, 7341-7342, 9591), Tehran (725).

Description of the Tashkent manuscripts: SVR (VII 275-278). Editions: al-Būnī [2-3]. Exposition of magic operations including the composition of magic squares.

My2. Threaded Pearls about the Science of Magic Squares and Astrology (al-Durr al-manẓūm fī `ilm al-awfāq wa'l-nujūm). Edition: al-Buni [1]. Research: Ahrens [2], Bergsträsser [2], Hermelink [1-2].

555. YUSUF AL-SABTI

Abū'l-Ḥajjāj Yūsuf ibn Isḥāq al-Sabtī al-Isrā'īlī (Joseph ben Yehuda ben Aknin) (d. 1226), a Jew from Ceuta, pupil of Ibn Maymūn (No 534); moved to Egypt with his teacher. After Ibn Maymūn died, he worked in Damascus as Sultan al-Malik al-Ẓāhir's physician.

See: HD (461), HD[2] (302), IHS (II 380-381), MAA (136), MAMS (II 372), UA (II 213); Friedländer [1] (JE).

E1. Healing of the Soul (Shifā' al-nafs) - see Steinschneider [13].

556. IBN MUN'IM

Ibn Mun'ım (12-13[th] c.) Spanish mathematician.

See: Djebbar [2], [9] (ENWC)

M1. Holy Science of Aritmetic (Fiqh al-Ḥisāb) - Rabat (416q). Treatise on number theory and combinatorial, contains the rule $C_n^p = C_{n-2}^{p-1} +.- C_{p-1}^{p-1}$

557. YAQUT AL-RUMI

Abu `Abdallāh (Abū'l-Durr) Yāqūt ibn `Abdallāh al-Rūmi al-Ḥamawī (1179-1229), Byzantine Greek (al-rūmı). He was a slave in Hama, Syria, in his youth. When freed, he became a bookseller; travelled extensively and died in Aleppo.

See: AGL (330-341), GAL (I 630-632), GAL[2] (I 880), IHS (II 642-643), KZ (I 247, 456, II 222, 396, III 151-152, IV 133, V 85, 554, 623-626, VI 68), MAMS (II 372), PI (II 14-19); Blacher [1] (EI), Browne [3] (II 431-432), Farmer [4] (45), Hikmatullayev and Shaislamov [1], Maqbul Ahmad [9] (DSB).

HS1. Guide for the Able for Knowledge of Scientists (Irshād al-arīb ʿalā maʿrifat al-adīb) - Istanbul (Köprülü 1103). Edition by Margoliuth: Yāqūt [3]. English translation: Yāqūt [2].

A1. Guide for Determining the Qibla without Instruments (Hidāya fī maʿrifat al-Qibla bi lā ḥiyal) - Istanbul (Atıf 1323).

G1. Dictionary of Countries (Muʿjam al-buldān). Edition by Wüstenfeld: Yāqūt [2], other editions: Yāqūt [1, 4, 6]. English translation of the first chapters: Yāqūt [5]. French translation of chapters on Iran and adjacent countries: Barbier de Meynard [1]. Russian translation of chapter on Azerbaijan: Yāqūt [7]. Research: AGL (334-336).

558. SIRAJ AL-DIN AL-SAKKAKI

Sirāj al-Dīn Abū Yaʿqūb Yūsuf al-Sakkākī al-Khwārizmī (1160-1229), from Khwarizm, died near Almalyq; scholar-encyclopaedist and philologist.

See: GAL (I 352-356), GAL² (I 515-519), KZ (I 114, II 33, IV 10, 166, V 112, VI 15-16), MAMS (II 372), STMI (599-600).

E1. Key of Sciences (Miftāḥ al-ʿulūm) - Cambridge (Sup. 1221), Hyderabad (Osm. 1034), London (Sup. 620, 981). The work was written in ab. 1220.

559. MUHAMMAD SAKKAKI

Muḥammad ibn Sirāj al-Dīn al-Sakkākī (12-13th c.), astronomer, son of Sirāj al-Dīn al-Sakkākī (No 558).

See: MAMS (II 372-373).

A1. Movement of the Planets (Tasyīrāt-i kawākib) P - Tashkent (5696/1), Tehran (Malik 6499/2, 6500; Sipahsalar 631/4).

560. AL-FADL AL-ʿUSAYFIRI

al-Faḍl ibn Abī Saʿd al-ʿUṣayfirī (13th c.), Yemeni mathematician.

See: GAL (I 510), GAL² (I 702), MAY (94), SSM (131).

M1. New Necklace in the Science of Inheritance (ʿIqd al-aḥādīth fī ʿilm al-mawārīth) - Cairo (Taymūr riyāḍa 353/1 - a fragment).

M2. Useful Key in the Science of Inheritance (Miftāḥ al-fāʾid fī ʿilm al-farāiḍ) - commentary on the work (No 860, M1) of al-Khālidī.

561. IBRAHIM AL-BAWSI

Abū'l-Qāsim ʿIzz al-Dīn Ibrāhīm ibn Muḥammad ibn Sulaymān al-Bawsī (13th c.), Yemeni mathematician.

See: GAL² (I 702, II 242), MAY (94), SSM (132)

M1. [Poem on Inheritance] - Rome (Vat. 1047). Poem is based on the work (No 560, M1) of al-ʿUṣayfirī.

M2. [Poem on Surveying] - Cairo (majlis 703/2 - a fragment).

562. RIDWAN IBN AL-SAʿATI

Fakhr al-Dīn Riḍwān ibn Muḥammad ibn ʿAlī ibn Rustum al-Khurāsānī (d. ca 1230) born in Damascus, came from Khurasan; was known as "Ibn Sāʿātī" (son of a watch-maker), worked in Damascus as a watch-maker.

See: GAL (I 625), GAL² (I 866), HMA (II 139), IHS (II 631-632), KWA (I 60, II 50), KWA² (I 168, III 240-241), MAA (136-137), MAA² (174), MAMS (II 373), ñSSM (55), UA (II 183-184); Suter [41] (EI), [52] (IA), Suter and Vernet [3] (EI²).

Me1. Book on the Construction of a Clock and its Operations (Kitāb fī ʿamal al-sāʿāt wa istiʿmālihā) - Cairo (mīqāt 890, riyāḍa 488, Taymur sinaʿa 24), Gotha (1348/1), Istanbul (Köprülü 949). Edition by Dahman: Ibn al-Saʿati [1]. German translation: Wiedemann and Hauser [2] (176-226). Research: Wiedemann [30].

563. ISMAʿIL AL-JAZARI

Abū'l-ʿIzz Ismāʿīl al-Razzāz al-Jazarī (12-13th c.), (son of a rice merchant "al-razzāz") known as Badīʿ al-Zamān ("Unicum of the Time"); worked in Amīd for Artuqid Sultan Naṣīr al-Dīn Maḥmūd (1200-1222).

See: GAL² (I 902-903), IHS (II 632-633), KZ (I 69, 401, V 48), MAA (137), MAMS (II 373-374), PL (II 445), SSM (55), STMI (471); Farmer [4] (44), Hill [4] (DSB), [7a] (EI²), [14] (ENWC), Jaritz [1] (LM), , K. Winter [1] (GAC).

Me1. Book on the Knowledge of Ingenious Mechanical Devices (Kitāb fī ma`rifat al-ḥiyal al-handasiyya) = Collection of Comprehensive Science and Practice in the Art of Mechanics (al-Jāmi` bayna'l-`ilm wa'l-`amal al-nāfi` fī ṣinā`at al-ḥiyal) - Berlin (fol. 3306/1), Boston, Cairo (riyāḍa 486-487, Taymūr ṣinā`a 37), Calcutta (Buhar 359), Dublin (Beatty 4187), Istanbul (SM AS 3606; TK 3350, 3461, 3472, Haz. 414) (facsimile edition Ankara, Ministry of Culture of Turkey), Leiden (117, 656), London (1661), Oxford (I 886, II 599, Fraz. 186), Paris (2477, 5101), St. Petersburg (Nat. ANS 478). Persian translations: London (839/1), Paris (801-802). Description of the Boston manuscript: Kuraswami [1]. Edition of part V: al-Hasan [5] (130-162). Complete edition by al-Hasan: al-Jazarī [2]. English translation by Hill: al-Jazarī [1]. Partial German translations: Wiedemann [112, 149, 153]. Research: Carra de Vaux [4, 10], al-Hasan [4-5], Hill [4] (DSB), [6], Kuraswami [1], Kushakova [1], Wiedemann [116, 120, 147], Wiedemann and Hauser [3, 5, 7].
Treatise in 6 parts: 1) horary devices, 2-3) vessels-automata, 4) fountains, 5) water lifting devices, 6) locks.

Me2. Treatise on the Descripton of Horary Devices Called Clepsydras (Risāla fī rasm ālāt al-sā`a al-ma`rūf bi'l-binkām) - Calcutta (359), Rampur (32), see KZ (I 69).

564. THEODORUS OF ANTIOCHIA

Theodorus of Antiochia (13th c.), Christian-Jacobite; studied first in Antiochia, later in Mosul as pupil of Ibn Yūnis (No 576); worked in Baghdad under Sultan `Alā' al-Dīn, in Cilicia under the Armenian King Constantin, father of King Hethum, later in Sicily; geometer, astronomer, knew philosophy and medicine well.
See: HD (521), HD² (341), MAA (137), MAMS (II 374).

565. MUHAMMAD AL-QUDA`I

Abū `Abdallāh Muḥammad ibn `Alī ibn al-Zubayr ibn Aḥmad al-Quḍā`ī al-Murbīṭarī (1149-1230) from Murviedro, Spain; was timekeeper and judge first in this city, later in Valencia; died in Valencia; arithmetician, also knowledgeable in law.
See: MAA (137), MAMS (II 374); Ibn al-Abbār [1] (I336).

566. MUHADHDHAB AL-DIN AL-DAKHWAR

Muhadhdhab al-Dīn Abū Muḥammad `Abd al-Raḥīm ibn `Alī ibn Ḥāmid al-Dakhwār (1170-1230), born in Damascus; physician of the brother of Sultan Ṣalāḥ al-Dīn al-Malik al-`ādil and of his son; he taught medicine to Ibn Abī Uṣaybi`a (No 601); astronomer and astrologer.
See: MAA (138), MAMS (II 375), UA (II 239-249); al-Kutubi [1] (I 325).

567. HUBAYSH AL-TIFLISI

Sharaf al-Dīn (or Kamāl al-Dīn) Abū'l-Faḍl Ḥubaysh ibn Ibrāhīm ibn Muḥammad al-Tiflīsī (1100-1230), from Tiflis, Georgia, physician in Konya at the court of Seljuk Sultan Kılıç Arslan III (1156-1192); author of many works in medicine, grammar, and astronomy.

See: GAL² (I 893), KZ (II 78, 80, 392, 414, IV 494, V 25, 476), MAMS (II 375), PL (II 458-459, 467-468, III 176), PL² (199-200, 1366).

A1. Introduction to the Science of Stars (al-Madkhal ilā al-nujūm) - Tashkent (209/10). KZ (V 476) calls this work "commentary on the work of al-Qābisī" (No 205, A2).

A2. Explanation of Stars (Bayān al-nujūm) - is mentioned in KZ (II 80).

Me1. Explanation of Handicrafts (Bayān al-ṣinā`āt). Edition: al-Tiflīsī [2]. Russian translation by Mikhalevich: al-Tiflīsī [6]. Book in 20 chapters on handicrafts, chemistry, and medicine.

My1. Prophecy of Daniel (Malhamāt Daniyāl). Edition: al-Tiflīsī [1].

My2. Perfect Interpretation of Dreams (Kāmil al-ta`ābīr). Edition: al-Tiflīsī [4].

L1. Canon of Education (Qānūn-i adab) P. Edition: al-Tiflīsī [5].

L2. Etymology of the Qur'an (Wujūh-i Qur'ān) P. Edition: al-Tiflīsī [3].

568. `ABD AL-LATIF AL-BAGHDADI

Muwaffaq al-Dīn Abū Muḥammad `Abd al-Laṭīf ibn Yūsuf ibn Muḥammad al-Baghdādī al-Mawṣilī (1162-1213), born in Baghdad, studied in Baghdad and Mosul as pupil of Ibn Yūnis (No 576); worked in Damascus, Cairo, Jerusalem, and Baghdad, Aleppo, Erzincan (Turkey); knowledgeable in philosophy, theology, philology, history, medicine, and mathematics.

See: GAL (I 632-633), GAL² (I 880-881), IHS (II 601-602), KZ (I 191, 227, 357, 382, 397, 447, 502, 506, II 149, 223, 581, III 102, 122, 141, 159, 445, IV 32, 109, 263, 324, 438, 446, 500, 504, 521, 579, V 50, 58, 61, 70, 75, 77, 95, 138, 160, 162-163, 209, 220, 338, 352, 384, 477, 489, VI 52, 61, 70, 140, 318, 416), MAA (138), MAMS (II 375-376), UA (II 201); Chéhadé [1], al-Kutubi [1] (II 9), de Sacy [1] (457-494).

M1. The Great Sufficient [Book] on Hindu Arithmetic (al-Mughnī al-jalī fi'l-ḥisāb al-hindī) - Beirut (227), Damascus (3078), see KZ (V 70).

M2. Refutation of Reasoning of Ibn al-Haytham on Space (Tahāfut qawl Ibn al-Haytham fi'l-makān) - is mentioned in UA. Commentary on the work (No 328, M23) of al-Haytham.

H1. Information and Reasoning on Deals and Testified Events in the Land of Egypt (al-Ifāda wa'l-i`tibār fi'l-umūr al-mushāhada wa'l-ḥawādith al-mu`āyana bi arḍ Miṣr). Many editions and translations; the best being the French translation of de Sacy [1].

569. AL-HASAN IBN AL-TARRAH

Al-Ḥasan ibn Muḥammad ibn Ja`far ibn `Abd al-Karīm (d. 1233), known by the name "Ibn al-Ṭarrāḥ" (son of a builder), worked in Egypt, Syria, and Iraq; astronomer and arithmetician, also knew literature well.

See: MAA (139), MAMS (II 377); al-Kutubi [1] (I 173).

570. MUHAMMAD AL-BAKRI

Abū `Abdallāh Muḥammad ibn `Abdallāh ibn `Īsā ibn Nu`mān al-Bakrī (1156-1234), from Valencia; arithmetician, also knowledgeable in inheritance.

See: MAA (139), MAMS (II 377); Ibn al-Abbār [1] (I 341).

571. MUHAMMAD AL-NASAFI

Muḥammad ibn Abī Bakr ibn `Alī Hamā'īl al-Nasafī (12-13th c.), from Nasaf (now Karshi in Uzbekistan), mathematician.

See: MAMS (II 377).

M1. Proof that Product of Added by Substracted is Substracted and that Product of Substracted by Substracted is Added by Geometric Way (Burhān ḍarb zāid fī nāqiṣ nāqiṣ wa ḍarb nāqiṣ fī naqiṣ zāid min ṭarīq al-handasa) - Moscow (Andronov). Russian translation by Sobirov: Andronov and Sobirov [1] (11-12).

572 MUHAMMAD IBN AL-HUSAYN

Muḥammad ibn al-Ḥusayn ibn Muḥammad al-Ḥusayn (d. ca 1235), worked at the court of Ayyubid Sultan Ṣalāḥ al-Dīn (1169-1193).

See: GAL (I 621), IHS (II 401), MAA (139), MAMS (II 377-378); Tuqan [1] (400).

M1. Treatise on Perfect Compasses and Properties of Drawing by its Aid (Risāla fi'l-birkār al-tāmm wa kayfiyyat al-takhṭīt bihī) - Algiers (1446/5), Leiden (2907/2), Paris (2468/4). Edition of the Paris manuscript and French translation: Woepcke [17] (16-67, 116-144). Research: Krasnova [1] (148-149). Treatise on the instrument for drawing a conic chapter invented by al-Kuhi (No 277), is dedicated to Sultan Salah al-Din.

573. MAHMUD AL-SHAYBANI

Sadīd al-Dīn Abū'l-Thanā Maḥmūd ibn `Umar ibn Muḥammad al-Shaybānī "Ibn Raqīqa" (1169-1238), physician, poet, philosopher, and astronomer, worked in Ḥama, Syria, and Damascus.

See: KZ (IV 321, 419, 496, V 236 518, VI 261), MAA (139-140), MAMS (II 378), PL (II 52), STMI (330), UA (II 219).

A1. Zīj of Nasir (Zīj-i Nāṣirī) P - Madras (Firuz 47/4). The Zīj is dedicated to Nāṣir al-Dīn Abū'l-Muẓaffar Maḥmud Iltutmish, Sultan of Delhi (1246-1266).

574. SHARAF AL-DIN AL-BURSAWI

Sharaf al-Dīn `Alī ibn Hamīd al-Bursawī (d. 1239), from Bursa (Turkey), astronomer.

See: KZ (VI 7), MAMS (II 379-380), PL (II 48-49).

A1. Burhan al-kifāya dar ahkām-i nujūm –P. Jerusalem (ieguda 245)

A2. Keys of Stars and Luminary of Sciences (Mafātiḥ al-nujūm wa maṣābīḥ al-`ulūm) - Baku (B 11/2), Manchester (Lind. 716d), Tehran (641/1, Malik 629/5, Univ. Ilah. 17/4). KZ informs that A2 is an abridgement of A1.

575. MUSLIM AL-SHAYZARI

Abū'l-Ghanā'im Muslim ibn Maḥmūd ibn Ni`ma ibn Arslān al-Shayzarī (d. 1240), astronomer; worked in Egypt and Yemen.

See: GAL (I 302), GAL^2 (I 460), MAY (22), SSM (56).

A1. Customs of Stars (`ādāt al-nujūm) - Cairo (falak 4678, 16000), Milan, Sana'a (Grand Mosque, majlis 32, 58).

576. KAMAL AL-DIN IBN YUNIS

Abū'l-Fatḥ Kamal al-Dīn Mūsā ibn Yūnis ibn Muḥammad ibn Man`a al-Shāfi`i (1156-1242), born in Mosul, pupil in Baghdad, taught in Mosul; mathematician, physician, and theologian, teacher of Naṣīr al-Dīn al-Ṭūsī (No 606); he died in Mosul. He became famous for solving a problem on the quadrature of segment of a circle that was proposed by the Ambassador of Emperor Frederick II (see Suter [46]).

See: GAL^2 (I 859), GAS (V 134, 141, 324, VII 403), HMA (II 144-145), IHS (II 800), KWA (II 132), KWA^2 (III 466), MAA (140-142), MAA^2 (218-219), MAMS (II 378), SSM (149), UA (I 306); Abu'l-Fida [1] (IV 465), Tuqan [1] (399).

M1. Treatise on Proof of the Premise Neglected by Archimedes in his Book on the Division of a Circle to Seven [Equal] Parts and on the Property of Its Use (Risāla fi'l-burhān `alā'l-muqaddima allatī ahmalahā Arshimīdis fī kitābihī fī tasbī` al-dāira wa kayfiyyat ittikhādh dhālika) = On the Division of a Circle to Seven [Equal] Parts (Fī tasbī` al-dāira) - Istanbul (TK 3342/5), Manisa (1706/8), Oxford (I 143/26, 940/8).

M2. Commentary [on Treatise] on Geometric Construction (Sharḥ al-a`māl al-handa-siyya) - Mashhad (30). Commentary on the work (No 256, M3) of Abū 'l-Wafā.

M3. Treatise on Proof that it is Impossible for two Odd Square Numbers to Exist so that their Sum is Square (Risāla fī bayān annahu lā yumkinu an yūjada `adadān murabba`ān fardān majmū`humā murabba`) - Berlin (6008/1), Cairo (riyāḍa 703/4), Istanbul (SM Carullah 1502/27), Paris (2467/15). Proof that the sum of two odd square numbers cannot be a square number.

M4. Treatise on Proof of two Premises Neglected by Apollonius at the End of the First Book of "Conic Sections" (Risāla fī bayān muqadddimatayn muhmalatay al-bayān ista`malahā Abulūniyūs fī awākhir al-maqāla al-ūlā min al-Makhrūṭāt) - Manisa (1706/9), Oxford (I 943/2, 987/4).

A1. Treatise on the Stick of Sharaf [al-Din] al-Ṭūsī (Risāla fī `amal `aṣā' Sharaf [al-Dīn] al-Ṭūsī) - Istanbul (TK 3494/2). Description of the manuscript: Kunitzsch [1] (51). Treatise on linear astrolabe of Sharaf al-Din al-Ṭūsī (No 541).

A2. Book of Sultan's Mysteries on Stars (Kitāb al-asrār al-sulṭāniyya fi'l-nujūm) - is mentioned by al-Zirikli [1] (VIII 288).

577. MUHAMMAD IBN AL-SAFFAR

Abū `Abdallāh Muḥammad ibn al-Ṣaffār (d. 1241/1242), from Cordoba, son of a copper-smith (ibn al-ṣaffār), travelled in the Muslim East; arithmetician, also knew literature well.

See: MAA (142), MAMS (II 379); al-Maqqarī [2] (I 378).

A1. [Treatise on the Astrolabe]. Research of medieval Latin translation by Plato of Tivoli: Lorch, Brey, Kirschner, and Schöner [1].

578. AHMAD AL-TAMIMI

Abu'l-`Abbās Aḥmad ibn `Alī ibn Isḥāq al-Tamīmī (12-13th c.), known by the name "Ibn Isḥāq"; astronomer.

See: MAA (142-143), MAMS (II 379), SSM (146); Samsó [33] (ENWC).
A1. Zīj (al-Zīj) - Hyderabad (riyāḍa 298). Research: Mestres [1].

579. JAMAL AL-DIN IBN AL-QIFTI

Jamāl al-Dīn Abū'l-Ḥasan `Alī ibn Yūsuf ibn Ibrāhīm al-Shaybānī al-Qifṭī (1173-1248), born in Qift (Koptos) in Upper Egypt, worked in Cairo, Jerusalem, and Aleppo; was vizier of Ayyubid sultans in Aleppo and died there.

See: GAL (I 396-397), GAL^2 (I 559), IHS (II 684-685), KZ (I 441, II 109, 142, 148, 159, III 260, IV 94, 135, 154, V 110, 428, VI 39, 166), MAA (143), MAMS (II 379), PL (I 1106-1107); Browne [3] (II 475-477), Dietrich [1] (EI^2), Farmer [4] (45), al-Kutubi [1] (II 121), Mittwoch [2] (EI), [4] (IA), Suter [23], Vahabova [1].

HS1. History of Wise Men (Ta'rīkh al-ḥukamā') = Information on Scientists According to Reports of Wise Men (Ikhbār al-`ulamā' bi-akhbār al-ḥukamā') = Garden of Scientists (Rawḍat al-`ulamā') - Berlin (10053-10054), Escorial (II 1778), Istanbul (Köprülü 1033; Ragıp 988; SM Halet 619, Yeni Cami 854), Leiden (159/1, 204/1), London (1583), Mashhad (14), Munich (440), Paris (2112), Strasbourg (30), Tehran (Malik 3480), Vienna (1161/2). Edition by Lippert: Ibn al-Qifṭī [1], other edition: Ibn al-Qifṭī [2]. English translation of mathematical chapters: Kapp [1]. Research: Derenbourg [7], Micheau [1], Suter [23] (on mathematical chapters), Vahabova [1], Wiedemann [20, 99, 106].

580. NAJM AL-DIN AL-IKHLATI

Najm al-Dīn Ayyūb ibn `Ayn al-Dawla ibn Naṣrallāh al-Ḥāsib al-Ikhlāṭī (12-13th c.), from Khilat, reckoner (al-ḥāsib), astronomer, and astrologer, worked in Damascus at the court of Ayyubid Sultan al-Ṣāliḥ ibn al-Malik (1239-1249).

See: GAS (VII 21-22), SSM (55).

A1. Explanation of what is Secret in the Predictions of Stars (Iẓhār ma kāna mustakhfiyan fī aḥkām al-nujūm) - Berlin (5880 - a fragment), Cairo (mīqāt 40), Istanbul (BU 4642), Tehran (250).

581. `ABDALLAH SIRAJ AL-DUNYA WA'L-DIN

`Abdallāh Sirāj al-Dunyā wa'l-Dīn (13th c.), Egyptian mathematician and astronomer.

See: GAL^2 (II 1018), MAMS (III 7), SSM (55-56).

M1. Guide for Pupils in the Science of Arithmetic (Hidāyat al-ṭullāb fī `ilm al-ḥisāb) - Alexandria (ḥisāb 20), Cairo (falak (4004/1).

A1. Lamps of Lights and Keys of Mysteries in Operations [of Timekeeping] at Night and Day (Maṣābīḥ al-anwār wa mafātīḥ al-asrār fī a`māl al-layl wa'l-nahār) - Cairo (Taymūr mīqāt 127).

582. `UTHMAN IBN AL-HAJIB

Jalāl al-Dīn Abū `Amr `Uthmān ibn al-Ḥājib (d. 1248), astronomer.

See: MAMS (II 380).

A1. The Sufficient [Book] on Stars (al-Kāfiya fī nujūm) - Shibin al-Qum (22/1, 27).

583. `ALAM AL-DIN AL-HANAFI

`Alam al-Dīn Qayṣar ibn Abi'l-Qāsim ibn `Abd al-Ghanī ibn Musāfir Ta`āsīf al-Ḥanafī (ca 1170-1251), born in Asfuna, Upper Egypt; pupil of al-Shaybānī (No 573) and other scholars in Egypt, Syria, and Mosul; worked and died in Damascus. In 1225 he made the celestial globe which is now in the National Museum in Naples (see I. Assemani [1]).

See: GAL (I 625), GAL^2 (I 867), GAS (V 111), IHS (II 623-624), KWA^2 (471, 473), MAA (143), MAMS (II 380-381); Abu 'l-Fida [1] (IV 479, 529), Tuqan [1] (402).

M1. Treatise on Knowledge of Properties of Parallel Lines and Their Essential and Separable Properties (Risāla fī ma`rifat khawāṣṣ al-ḥuṭūṭ al-mutawāziyya wa a`rāḍihā al-dhātiyya wa'l-mutaqāṭi`a) - Aligarh (Azad Sulayman 155/15), Berlin (5942), Istanbul (Atıf 1712/12; Köprülü 931/16; SM AS 2760/2, Carullah 1502/2, Fatih 3440/3; TK 3456/2), Mashhad (82), Paris (2467/6), Tehran (Sipahsalar 597). Edition: al-Ṭūsī [9] (No 8, 36-40). Photo-reproduction and English translation: Sabra [7] (8-10, 19-20). French translation: Jaouiche [4]

(227-231). Incomplete Russian translation by Rosenfeld: al-Ṭūsī [16] (523-524). Research: Jaouiche [4] (108-109), *Pont [1] (160-162), Rosenfeld [27] (82-83), Rosenfeld and Yushkevich [10] (101). Letter to al-Ṭūsī on* his treatise (No 606, M15). Usually manuscripts of this letter were copied together with manuscripts of the treatise of al-Ṭūsī. Al-Ḥanafī indicated a logical error in this treatise and therefore in his later exposition of his theory of parallel lines in (No 606, M1) al-Ṭūsī added a postulate equivalent to the postulate V of Euclid. The letter contains also exposition of the proof of the postulate V by Simplicius (6th c.).

584. ISMA`IL IBN FALLUS

Shams al-Dīn Abū'l-Ṭāhir Ismā'īl ibn Ibrāhīm ibn Ghāzī al-Māridīnī (1194-1252), known by the name "Ibn Fallūs", born in Mardin (Turkey); mathematician, worked in Mecca.

See: GAL (I 622), GAL² (I 860), GAS (V 76, 166), IHS (II 703), KZ (III 63, V 74, VI 346), MAA (143-144), MAMS (II 381), SSM (56).

M1. Book of Preparation on Mysteries and Mysteries of Numbers (Kitāb i'dād al-asrār fī asrār al-a'dād) - Berlin (5970), Cairo ('ulum 23317/3). Description of the Berlin manuscript: Ahlwardt [1] (331). Research: S. Brentjes [3]. Treatise on number theory in 3 chapters. .

M2. Directions to Reckoners Showing the Right Path in Revealing the Science of Arithmetic (Irshād al-ḥussāb *fī'l-maftūḥ min `ilm al-ḥisāb) - Berlin (5971), Cairo ('ulūm 23317/5), Istanbul (SM AS 2761/7). Description of* the Berlin manuscript: Ahlwardt [1] (331-332). Photo-reproduction of the first page of the Cairo manuscript: SSM (308).

M3. Book on Calculus of Algebra (Niṣāb al-ḥabr fī ḥisāb al-jabr) -Berlin (5972), Cairo ('aqaid 3964/3, riyāḍa 112/3 - an anonymous fragment, 359, `ulum 23317/2), Istanbul (Millet Feyzullah 1366), is quoted in KZ (VI 346). Description of the Berlin manuscript: Ahlwardt [1] (332). Research: S. Brentjes [7]. The treatise was written in Cairo in 1239.

M4. Balance of Sciences in Investigation of the Known (Mīzān al-`ulūm fī taḥqīq al-ma`lūm) - Milan (C 217/3).

M5. Resolution of the Knot of Difficulties in the Measurement of Figures (Ḥall `aqd al-ishkāl fī misāḥat al-ashkāl) = Many Operations of Measurement (al-Ṭuffāḥa fī a`māl al-misāḥa) - Cairo (falak 17027/2, riyāḍa 625, `ulum 23317/4), Rabat (507/23). Edition: Ibn Fallūs [1]. Treatise was written in Cairo in 1232.

585. AHMAD AL-TIFASHI

Shihāb al-Dīn Abū'l-`Abbās Aḥmad ibn Yūsuf al-Tīfāshī al-`Anasī (1184-1253), born in Tifash, Algeria, worked and died in Cairo; jeweller and naturalist.

See: GAL (I 632), GAL² (I 904), IHS (II 650), KZ (I 261, II 33, 149, 654, III 208, 582, 597, IV 62, 421, 486), MAMS (II 382); Plessner and Klein-Franke [1] (DSB), Ruska [21] (EI), [29] (IA), Farmer [4] (45).

Mi1. Flowers of Thoughts on Precious Stones (Azhār al-afkār fī jawāhir al-aḥjār) - Cairo (Falak 8311). Edition by Raineri with Italian translation: al-Tīfāshī [1], Italian translation by Raineri: al-Tifashi [2]. Partial French translation: Clement-Mullet [2]. Partial Latin translation: Ravius [1]. Treatise on minerals containing a chapter on magnet: al-Tīfāshī [1] (49-52).

586. MUHAMMAD IBN TALHA

Muḥammad ibn Ṭalḥa (d. 1254), astronomer.

See: MAMS (II 382).

A1. *Note on Determining the Beginnings of Months for all the Years (Fā'ida li-istikhrāj awā'il al-shuhūr wa* jamī` al-sanawāt) - Berlin (5781).

587. MUHAMMAD AL-BALANSI

Abū `Abdallāh Muḥammad ibn `Umar ibn Badr al-Balansī (13th c.), born in Valencia, worked in Seville; in medieval Europe was known as "Abenbeder", mathematician.

See: GAL² (I 860), IHS (II 622), MAA (197), MAMS (II 382), SSM (137); Tuqan [1] (418-423).

M1. Abridgement of Algebra and Almucabala (Ikhtiṣār al-jabr wa'l-muqābala) - Cairo (falak 6829/2 - a fragment), Escorial (II 936/1). Description of the Escorial manuscript: Derenbourg [7] (48-49). Edition with Spanish translation: Sanches Perez [1].

588. MUHAMMAD IBN WUSUDI

Muḥammad ibn Wusudī Yaḥmīd (13th c.), mathematician.

See: MAMS (II 382).

M1. Core of Arithmetic on the Science [of Reckoning] by [Board and] Dust (Lubāb al-ḥisāb fī `ilm al-turāb) P - Cambridge (Sup. 41), Tashkent (2692/9). Research of the Tashkent manuscript: Badalov [1].

589. `IZZ AL-DIN AL-ZANJANI

`Izz al-Dīn (`Izz al-Batul) Abu'l-Faḍā'il `Abd al-Wahhāb ibn Ibrāhīm ibn `Abd al-Wahhāb ibn Abī'l-Ma`ālī al-Khazrajī al-Zanjānī (13th c.), from Zanjan, worked in Baghdad, grammarian, mathematician and astronomer.

See: GAL (I 336-337), GAL² (I 497-498, II 1021), KZ (I 225, IV 514, V 6, 360, 632, VI 199, 471), MAA (144), MAMS (II 383, III 20), SSM (150).

M1. Principles of Arithmetic (`Umdat al-ḥisāb) - Istanbul (TK 3146, 3457). Description of the manuscripts: Sayyid [1] (67).

M2. Book of Elements of Geometry (Kitāb'al-uṣūl fi'l-handasa) - Baku (B 2520, 4280/1).

M3. [Treatise on Magic Squares] - Istanbul (Köprülü 828; Millet Feyzullah 1362/5). Edition and research: Sesiano [13].

M4. Treatise of `Izz al-Din on Mental Arithmetic (al-Risāla al-`Izziyya fi'l-ḥisāb al-hawā'ī) - Yemeni Treatise (al-Risāla al-Yamaniyya) - Cairo (majlis 713/10 - under the second title, anonymous), Damascus (6000/3 - under the first title, 7759 - under the same title but attributed to (No 862)`Imād al-Dīn Yaḥyā - under the same title but anonymous).

M5. Sea of Uses in the Science of Arithmetic (Baḥr al-fawāid fī `ilm al-ḥisāb) - is mentioned in M4 as an extensive treatise and in KZ.

M6. Sufficient Treatise on Arithmetic (al-Risāla al-kāfiyya fi'l-ḥisāb) - Mosul (237).

M7. Balance of Equation in the Science of Algebra and Almucabala (Qusṭas al-mu`ādala fī `ilm al-jabr wa'l-muqābala) - Istanbul (TK 3457). Description of the manuscript: Sayyid [1] (67) where this treatise is identified with M1. Research: Yadigari [2]. Book in 10 chapters: arithmetic of integers and fractions, powers, binomial formula, algebra.

A1. Concise [Book] on the Use of Astrolabe (Mukhtaṣar fī isti`māl al-asṭurlāb) - Jakarta (Sup. 621), Leiden (193/1).

590. MUHAMMAD IBN AL-ABBAR

Abū `Abdallāh Muḥammad ibn `Abdallāh ibn Abī Bakr ibn al-Abbār al-Quḍā`ī (1199-1260), born in Valencia, secretary of the ruler of Valencia. After the capture of Valencia by Christians he fled to Tunisia, where he became vizier. He was killed on the suspicion of a conspiracy.

See: KZ (II 115, 236, III 527), MAMS (II 383); Ben Cheneb [3] (EI), Ben Cheneb and Pellat [1] (EI²).

HS1. Book of Completion of "[Book of] Gift" (Kitāb takmilat al-Ṣila) - Escorial (II 1675, 1678). Edition by Codera: Ibn al-Abbār [1] - continuation of "Book of Gift" of Ibn Bashkuwāl (No 492, HS1). Supplement: Alarcón and Palencia [1].

HS2. Directory of Pupils of Judge Imam Abu `Ali al-Sadafi ibn Sukkara (al-Mu`jam fī aṣḥāb al-qāḍī al-imām Abī `Alī al-Ṣadafī ibn Sukkara) - Escorial (II 1730). Edition by Codera: Ibn al-Abbār [2].

591. AL-HASAN AL-DARIR

`Izz al-Dīn al-Ḥasan ibn Muḥammad ibn Aḥmad ibn Najā al-Darīr (1190-1260) (al-ḍarīr= blind) from Irbil, died in Damascus; knowledgeable in literature and sciences of the ancients.

See: HD (526), HD² (344), MAA (144), MAMS (II 383-384); al-Kutubi [1] (I 171).

592. AL-HASAN AL-MARRAKUSHI

Abū `Alī al-Ḥasan ibn `Alī (Abu'l-Ḥasan `Alī) ibn `Umar al-Marrākushī (d. 1262), from Marrakush, Morocco; mathematician and astronomer.

See: GAL (I 625), GAL[2] (I 866), IHS (II 621-622), KZ (I 393, II 572-573, III 389), MAA (144-145), MAMS (II 384-387), SSM (58-59); Delambre [1] (185-190), King [52] (EI[2]), Tuqan [1] (416-417). Collection of papers: "al-Marrakushī" [1].

A1. Collection of the Beginning and Results in the Science of Timekeeping (Jāmi` al-mabādī wa'l-ghāyāt fī `ilm al-miqāt) - Cairo (falak 3821, 4050 - chapter on the use of armillary sphere, mīqāt 115 - chapter on astronomical instruments, 124/2, 125/3 - chapter on spherical astronomy, 136/3, 194/1-2 - chapters on the use and construction of astrolabes zarqala and shikkaziyya, 291/3, 521/8 - chapter on the celestial globe, 597/2 and 782/3 - chapters on certain instruments, 1208 - Parts I and II, Fadil mīqāt 9/2, 175/1, 213/2 - chapter on trepidation, Tal`at mīqāt 155/4 and Taymur hay'a 3821 - chapters on the construction of astrolabes zarqala and shikkaziyya, Taymūr riyāḍa 137, 140/14), Damascus (7641), Istanbul (Atıf 1687; BU Veliyuddin 2266; NO 2901-2902; SM AS 2569, 2599, Hamidiye 838, Selim 866; TK 3343), Leiden (60, 51/2 - incomplete), Mashhad (41), Paris (2507 - Part I and three chapters of Part II, 2508 - four chapters of Part II and Parts III-IV), Tehran (4608), is quoted in KZ (II 572-573).
Edition of contents and French translation of the Paris manuscript 2507 by J. Sedillot, published by L. Sedillot: al-Marrakushī [1]. Facsimile edition of the Istanbul manuscript 3343: al-Marrakishi [2]. French translation of two chapters of Part IV on "linear astrolabe": Carra de Vaux [7] (469-516), Edition with French translation of certain fragments of the Paris manuscript 2508 - L. Sedillot [7]. Research: Karpova and Sergeyeva [1-2] (use of a graph of a functional dependence), L. Sedillot [7], Souissi [8], Tagi-zade and Shubina [1] (general research).
Treatise in 4 parts ("sciences" - funūn): 1) on astronomy, trigonometry, chronology, geography (87 chapters), 2) on construction of instruments (7 chapters), 3) on use of instruments (14 chapters), 4) on problems (4 chapters). Treatise contains numerous quotations from treatises of al-Kūhī (No 277), al-Sijzī (No 296), al-Ṣaghānī (No 223), al-Bīrūnī (No 348), and al-Zarqalī (No 402).

A1a. Book on Operations with the Astrolabe (Kitāb al-`amal bi'l-asṭurlāb) - Beirut (197), perhaps it is a fragment of A1.

A2. Book of Concise Exposition of Operations for Determining the Visibility of the New Moon (Kitāb talkhīṣ al-a`māl fī ru'yat al-hilāl) - is mentioned in A1 by al-Marrakushī [1] (81).

A3. Instruments of Calendar (ālāt al-taqwīm) - is mentioned in KZ (I 393).

593. HUSAM AL-DIN AL-SALAR

Ḥusām al-Dīn `Alī ibn Faḍlallāh al-Sālār al-Shāmī (d. 1262), born in Syria (al-shāmī). Before the Mongol invasion of Central Asia, he was an astronomer, astrologer, and counsellor of Khwarizmshah `Alā' al-Dīn Muḥammad (1200-1220), the ruler of a large empire that stretched from India to Anatolia. When Khwarizmshah began preparations for the invasion of Baghdad, al-Sālār tried dissuade him, as he regarded the Caliph of Baghdad as a saint and predicted a catastrophe; which became real. Central Asia was invaded by the hordes of Genghis Khan (1206-1227) and the Khwarizm empire perished. Al-Sālār regarded this invasion as God's punishment and joined the Mongols. He became the astronomer, astrologer and counsellor to Genghis Khan and the following Mongol khans up to Hulagu (1256-1265). In 1258 Hulagu also began preparations to invade Baghdad and al-Sālār again tried dissuade Hulagu from campaigning against the Caliph of Baghdad. Hulagu had another counsellor in Nasir al-Din al-Ṭūsī (No 606), who supported Hulagu in the Baghdad campaign that ended with the capture of the city and the end of the Baghdad caliphate. al-Ṭūsī founded a great astronomical observatory in Maragha, Azerbaijan, and al-Sālār became one of employees of this observatory, but in 1262 he was executed for his "Baghdad prophecy".

See: GAL[2] (I 870), GAS (VII 401), MAA (195), MAMS (II 387-388), SSM (151); Rashid al-din [2] (III 39, 59').

M1. Premises for Proof of a Postulate in the First Book of Euclid (Muqaddamāt li tabyīn al-muṣādara fī'l-maqāla al-ūlā li-Uqlīdis) = Premises for Proof of Postulate Formulated by Euclid in Beginning of the the First Book and Related to Parallel Lines (Muqaddamāt li tabyīn al-muṣādara allatī dhakarahā Uqlīd[is] fī ṣadr al-maqāla al-ūlā fīmā ya`tallaqu bi'l-khuṭūṭ al-mutawāziyya) - Cairo (riyāḍa 701), Dublin (Beatty 3045/12) - both under the first title, Mashhad (5412 - under the second title). Photo-reproduction of the Mashhad manuscript: Humai [1] (285-294). Russian translation of this manuscript by Rosenfeld and Khayretdinova: al-Sālār [1]. Research: GAS (VII 401). An attempt of proof of Euclid's Postulate V in 6 premises and final proposition. In this treatise Salar proves certain "principles of Philosopher" quoted by Khayyām in (No 420, M3), but Sālār's Premise 2 itself contains a logical error.

M2. Abridgement of Assertions of the First and Second Books of the Work "Elements" of Euclid (Ikhtiṣār da`āwī al-maqālatayn al-ūlā wa'l-thāniyya min Kitāb al-uṣūl li-Uqlīdis) - Cairo (riyāḍa 700), Dublin (Beatty 3045/13).

M3. Treatise on Abridgement of Assertions in the First Book of the Work of Euclid (Risāla dar ikhtiṣār-i da`āwi-yi maqāla-yi ūlā az kitāb-i Uqlīdis) P - Mashhad (5416).

M4. [Treatise on Figure of Secants] - is mentioned in the works (No 606, M13) of al-Ṭūsī [12] (44, 52) and also in his (No 606, A1). The similarity of the structures of (No 606, M13-M14) and (No 341, M4) of al-Nasawi and the fact, that in (No 606, M13 and M14) al-Ṭūsī mentioned al-Sālār as his only forerunner shows that this treatise of al-Sālār was an intermediate link between (No 341, M4) and (No 606, M13-M14).

A1. Treatise on Determining the Azimuth of Qibla (Risāla fī istikhrāj samt Qibla) - Mashhad (5415).

A2. Zīj of Shah (Zīj-i Shāhī) - is mentioned in the work (No 709, A1) by al- Wābkanwī and in works of Byzantine astronomers who called al-Sālār Khousamē Salar and "Zīj of Shah" - "Syntaxis Isakhē", see Olivieri [1] (85) and Heeg [1] (145). The title of this Zīj shows that it was dedicated to Khwarizmshah.

594. MUHAMMAD AL-DAJI AL-GHAZNAWI

Muḥammad ibn `Abd al-Karīm al-Dājī al-Ghaznawī (13th c.), from Ghazna, mathematician.

See: KZ (II 230), MAMS (II 388), PL (II 6), SSM (149), STMI (405); Matviyevskaya and Tllashev [6] (34).

M1. Gift from the Heart (Tuḥfat al-ṣudūr) P- Cairo (riyāḍa fārisī 1), Cambridge (Palm. 61, Sup. 276; Trinity 13, 29, 61, 87). Research: Hermelink [8, 9]. Treatise on arithmetic and geometry in 5 books.

595. ATHIR AL-DIN AL-ABHARI

Athīr al-Dīn al-Mufaḍḍal ibn `Umar al-Abharī (d. 1263), born in Abhar, Jibal, pupil of al-Shaybānī (No 573), worked in Mosul and Irbil, philosopher, author of the revision of Porphyry's "Introduction to "Cathegories" (of Aristotle).

See: GAL (I 608-611, 625), GAL^2 (I 839-844), GAS (VII 401), HD (485), IHS (II 867), KWA [1] (II 133), KWA^2 (III 468), KZ (I 307, 502, II 440, III 101, 538, V 206, 212, 426, 653, VI 112, 383, 473, 568), MAA (145-146), MAMS (II 388-390), SSM (149-150), STMI (478); Anawati [6], Seybold [3].

E1. Guide in Philosophy (Hidāya al-ḥikma) - Hyderabad (Osm. 666, Salar (falsafa 100), Mashhad (961-963). Edition: al-Abhari [4]. Encyclopaedical treatise.

M1. Treatise for Compass for [Conic] Sections (Risāla fī birkār al-quṭū`) - Istanbul (TK 3455/10). Treatise on "perfect compass" invented by al-Kūhī (No 277).

M2. Improvement of "Elements" of Euclid (Iṣlāḥ al-Isṭuqsāt, Iṣlāḥ Uṣūl Uqlīdis) - Dublin (3424 - under the first title), Istanbul (ArM 596), Tehran (Sipahsalar 219 - under the second title). Work in 13 books. Certain chapters are included in (No 655, M1) of al-Samarkandī, therefore the proof of Postulate V in this treatise was published by Dilgan [5, 7] and by Rosenfeld and Yushkevich [3] as proof of al-Samarkandi. French translation of the chapter on parallel lines: Jaouiche [4] (116-119).

M3. Book on Equations (Kitāb al-mu`ādalāt) - is quoted in anonymous algebraic treatise Istanbul (SM Carullah 1457/3), see SHIM (521).

A1. Concise Zīj according to `Alā' al-Dīn's Observations (al-Zīj al-mulakhkhaṣ `alā al-raṣad al-`Alā'ī) - Calcutta (Buhar 347). Research: SIAT (131). Possibly, it is an abridgement of "Zīj of Shah" (No 593, A2) by al-Sālār dedicated to Khwarizmshah `Alā' al-Dīn Muḥammad.

A2. Book on the Science of Astronomy (Kitāb fī `ilm al-hay'a) = Concise [Book] on the Science of Astronomy (Mukhtaṣar fī `ilm al-hay'a) = Science of Astronomy Abridged from Astronomy of Kushyār and from Astronomy of Ibn Aflaḥ of Seville (Mā ikhtaṣarahu fī `ilm al-hay'a min hay'at Kushyār wa min hay'at Ibn Aflaḥ al-Ishbīlī) - Cairo (hay'a 57, Ṭal`at hay'a 48/2), Istanbul (SM Carullah 1499/2), Leiden (134/3), Paris (2515). Description of the Istanbul manuscript: SHIM (493). Treatise in 22 parts composed in 1335 by the books (No 308, A8) of ibn Labban and (No 448, A1) ibn Aflah.

A3. Treatise on the Science of Astronomy (Risālā fī `ilm al-hay'a) - Istanbul (Millet Feyzullah 1339/2). Description of the Istanbul manuscript: SHIM (493). Treatise in 20 chapters.

A4. Treatise on Knowledge of the Astrolabe (Risāla fī ma`rifat al-asṭurlāb) - Cairo (Taymūr riyāḍa 165/3 - anonymous), Istanbul (SM Carullah 1468/1). Description of the Istanbul manuscript: SHIM (493).

A5. Rules of Comprehension on the Knowledge of Celestial Spheres (`Aqāid al-idrāk fī dirāyat al-aflāk) - Oxford (I 940/9).

A6. Sufficient for the Contented (Kifāyat al-kanū`) - Mahachqala (187/4). Treatise on operations with the astrolabe.

A7. Zīj of Fakhir (Syntaxis tou Fecheir) - is mentioned in Byzantine translation of "Zīj" of Shams al-Din al-Bukhari (No 694, A1), probably, it is a revision of Zīj (No 341, A2) of al-Nasawī with the same title.

PH1. Introduction [to Logic] (īsāghūjī). Edition: al-Abharī [2]. Edition with Latin translation: al-Abharī [1]. English translation by Calverly: al-Abharī [3].

596. `ABD AL-RAHMAN AL-DALAILI AL-QURTUBI

Abū Zayd `Abd al-Raḥmān ibn `Alī ibn 'Umar al-Dalā'ilī al-Qurṭubī (13th c.), from Cordoba, mathematician.

See: GAL² (II 1018), MAA (302), MAA³ (177), MAMS (III 8).

M1. Concise Exposition of Arithmetic Operations (Talkhīṣ fī a`māl al-ḥisāb) - Escorial (930).

597. AL-BAYHAQI

Al-Bayhaqī (13th c.), from Bayhaq near Marw, astronomer.

See: SSM (150-151).

A1. Concise [Book] on the Science of Astronomy (Mukhtaṣar fī `ilm al-hay'a) - Cairo (hay'a 75).

598. MUHAMMAD AL-MAGHRIBI

Muḥammad ibn Abī`l-Shukr al-Maghribī (13th c.), Spanish mathematician, father of (No 635), Muḥyī ibn Abī'l-Shukr al-Maghribī.

See: STMI (406)

M1. [Revision of] the Book of Menelaus on Spherical Figures (Kitāb Manalāwūs fī'l-Ashkāl al-kurriyya) - Hyderabad (Salar riyāḍa 6 - is ascribed to (No 606), London (Ind. 741/2). Treatise was written in Spain ab. 1365.

599. NAJM AL-DIN IBN AL-LUBUDI

Najm al-Dīn Abū Zakarīyā Yaḥyā ibn Muḥammad ibn `Abdān ibn `Abd al-Wāḥid al-Dimashqī (Ibn al-Lubūdı) (1210-ca 1265), born in Aleppo, physician, philosopher, and mathematician, worked in Damascus and Hims, Syria, where he was the vizier, and in Egypt.

See: HD [1] (256), HD² (344), IHS (II 524), KZ (I 304, 370, 384, 506, II 253, III 342, 432, 446, 452, 565, IV 280, 296, 301, 438, 500, V 6, 333, 516, 612, VI 87, 112, 160, 335), MAA (146), MAMS (II 390), UA (II 185-189); Farmer [4] (46), Tuqan [1] (403-404),

UA mentions his following works:

M1. Abridgement of the book of Euclid (Mukhtaṣar kitab Uqlīdis) - is mentioned also in KZ [4] (I 384).

M2. Concise [Exposition] of Postulates of Euclid (Mukhtaṣar muṣādarāt Uqlīdis).

M3. Sufficient for Reckoners in the Science of Arithmetic (Kifāyat al-ḥussāb fī `ilm al-ḥisāb) - is mentioned also in KZ (V 6).

M4. The Most Necessary Issues from Euclid and "Intermadiate [Books]" (Ghāyat al-ghāyāt fī'l-muḥtāj ilayhi min Uqlīdis wa'l-mutawassiṭāt). "Intermediate books" were studied between Euclid's "Elements" and Ptolemy's "Almagest".

M5. Perfect Treatise on the Science of Algebra and Almucabala (al-Risāla al-kāmila fī `ilm al-jabr wa'l-muqābala).

M6. Treatise for al-Manṣūr on Numbers in Magic Squares (al-Risāla al-Manṣūriyya fī'l-a`dād al-wafqiyya).

A1. Zīj of Shah (al-Zīj al-Shāhī).

A2. Zīj Based on Experimental Observations (al-Zīj al-mabnī `ala'l-raṣad al-mujarrab).

600. FAKHR AL-DIN AL-MARAGHI

Fakhr al-Dīn Abū'l-Layth Muḥammad ibn `Abd al-Malik ibn Abī'l-Ḥāris ibn Ṣumaym al-Marāghī (1188-1268), worked in observatory of al-Ṭūsī (No 606) in Maragha; mathematician, astronomer, technician, also knowledgeable in logic.

See: MAMS (II 391); Buniyatov [2] (10).

601. AHMAD IBN ABI USAYBI`A

Muwaffaq al-Dīn Abū'l-`Abbās Aḥmad ibn al-Qāsim ibn Abī Uṣaybi`a al-Sa`dī al-Khazrajī (1194-1270), born in Damascus, son of a physician-opthalmologist, worked as physician in Cairo and Damascus, died in Damascus.

See: GAL (I 397-398), GAL² (I 560), IHS (II 685-686), KZ (IV 133, 288), MAMS (II 391); Browne [3] (II 478), Meyerhof [5] (EI), [10] (IA), Vahabova [1], Vernet [9] (EI²).

HS1. Sources of Information on [Various] Classes of Physicians (`Uyūn al-anbā fī ṭabaqāt al-aṭibbā) - Cairo, Istanbul (Köprülü 1104; SM Damat 935, Fatih 4438, Şehit 1923, Yeni Cami 891-892; TK 2859-2860), Leiden (59a, b, 76, 3029), Mashhad (XIV 76), Mosul (25/42), Munich (800/1), Oxford, Paris (2113/7, 2118, 5939, Sup. 637), Patna (786), Rampur (I 176), Vienna (1164). Editions: by al-Tahhana - Ibn Abi Usaybi`a [2], by Müller: Ibn Abī Uṣaybi`a [3], fragment: Ibn Abī Uṣaybi`a [1]. Partial French translations: Sanguinetti [1], Ibn Abī Uṣaybi`a [4].

602. AHMAD IBN THABAT

Abū'l-`Abbās Jamāl al-Dīn Aḥmad ibn Thabāt (d. 1272-1273), Egyptian mathematician.

See: GAL² (I 860), MAA (146), MAMS (II 391), SSM (57), STIM (419).

M1. Sufficient for Reckoners in the Science of Arithmetic (Ghunyat al-ḥussāb fī `ilm al-ḥisāb) - Damascus (3075), Istanbul (SM AS 2728/2), Patna (2413). Description of the Patna manuscript: Abd al-Hamid [1] (1-8).

M2. (`Umdat al-rā'iḍ wa `uddat al-fāriḍ fi'l-ḥisāb) - is mentioned in the introduction to M1 (see SHIM (494) and KZ (IV 259).

603. MUHAMMAD AL-FARIQI AL-MUHASIB

Muḥammad ibn Muḥammad al-Fāriqī al-Muḥāsib (13th c.) (al-muḥāsib = book-keeper), Egyptian mathematician and astronomer.

See: KZ (III 470, 568), SSM (57)

A1. Zīj of Terms (al-Zīj al-muṣṭalaḥ) - Cairo (mīqāt 1106 - chapter II of introduction, Fāḍil mīqāt 39, 168/1, 241/1 - fragments), Paris (2513, 2520). Research: SIAT (9-10).

604. MUHAMMAD AL-KHUZA`I

Jamāl al-Dīn Abū `Abdallāh Muḥammad ibn Aḥmad ibn `Umar al-Khuzā`ī (13th c.) from Yemen.

See: GAS (V 240), MAA (146). MAMS (II 392), MAY (54-55), SSM (131-132), TIFI (232).

M1. Introduction to Arithmetic for All New Scribes (Muqaddima fi'l-ḥisāb li-`āmmat aḥdāth al-kuttāb) - Alexandria (Mun. B 1030/6), Cairo (falak 18362/1), Oxford (I 918/2).

M2. Commentary on al-Khwarizmi's Concise [Book] (Sharḥ mukhtaṣar al-Khwārizmī) - Cairo (Ṭal`at majlis 207/4 - a fragment), Istanbul (SM Şehit 2706/5). Research: King [49a] (this treatise contains information on algebra before al-Khwārizmī).

M3. Book of Construction in the Science of Algebra and Almucabala (Kitāb al-inshā' fī `ilm al-jabr wa'l-muqābala) - Istanbul (SM Şehit 2706/6).

605. `ALI AL-NASRI

`Alī ibn Rāshid ibn Aḥmad ibn Mūsā ibn Yaḥyā ibn Naṣr al-Naṣrī (13th c.), Yemeni mathematician.

See: SSM (132).

M1. [Additions to the commentary by al-Khuzā`ī on al-Khwārizmī] - Cairo (Ṭal`at majlis 207/5). Additions to the work (No 604, M2) of al-Khuzā`ī.

606. NASIR AL-DIN AL-TUSI

Naṣīr al-Dīn Abū Ja`far Muḥammad ibn Muḥammad al-Ṭūsī (1201-1274) was born in Tus, Khurasan; pupil of ibn Yūnis (No 576); scholar-encyclopaedist and shi`ite theologian, worked in the State of Assassins, first in Sartakht, Kuhistan, as astrologer of Nāṣir al-Dīn `Abd al-Raḥīm, Assassin governor of Kuhistan, later at Alamut, the capital of the State of Assassins, at the court of great magisters `Alā' al-Dīn Muḥammad (1221-1255) and Rukn al-Dīn Khurshah (1255-1256). In 1256 during the siege of Alamut by Mongols, he convinced

Khurshah to surrender to the Mongols. He became the astrologer and counsellor of Mongol Khan Hulagu (1256-1265) and his son Abaqa (1265-1282). In 1258, al-Ṭūsī joined the campaign against Baghdad, which led to the murder of the last Baghdad Caliph al-Musta`ṣim (1242-1268); he negotiated with the Caliph on the capitulation of the city. In 1259, he founded a great astronomical observatory and the scientific school in Maragha, capital of the Ilkhanid Kingdom. Scientists under the Mongol rule as well as scientific manuscripts and instruments were all gathered here.

See: AGL (111-115), GAL (I 670-676), GAL² (I 924-933), GAS (V 55-81), HD (548), HD² (358), IHS (II 1001-1013), KZ (I 90, 205, 302, 383, 389-390, 494, II 83, 194, 205, 213, 268, 299, 496, III 100, 366, 371, 387, 440, 466, 468-469, 534, 561, 565, 573, 642, IV 503, 573, V 48, 70, 112, 143-144, 150-152, 154, 159, 262, 385, 387, 422, 475, 634, VI 8, 230), MA (120-123, 141-146), MAA (146-153), MAA³ (172), MAMS (II 392-408), PL (II 6-7, 52-60, 449-450, 480-481, III 179-180), SSM (151-153), STMI (279-283, 384-385, 472, 497); Abu'l-Fida [1] (V 37), Anas Khan [1], Baqir [1], Berggren [10] (138-141), Boltayev [1] (225-340), Browne [3] (II 485-486), [4] (17-18), Delambre [2] (198-203), Dilgan [2, 4], Dinorshoyev [1], Eyvazov [1-5], Farmer [4] (46-47), F. Jamil [6] (ENWC), Kennedy [41], Khalilov [2], Köprülü [1], Kutubi [1] (186-189), Mamedbeyli [1-3, 6-7, 9], Matviyevskaya and Tllashev [1], [6] (18-24), Mieli [2] (150-154), Miklukho-Maclay [1], Nasr [10] (DSB), Qasumkhanov [1], M. Ridawi [1], Rosenfeld [1-3], [22] (SeT), Rosiñka [1], Rzayev [1], Safa [3], Sayılı [11], [18] (189-223), Strothmann [1], Strothmann and Ruska [1] (EI), [2] (IA), Subbotin [2], Tllashev [3-4], Tuqan [1] (407-415), A. Usmanov [4], Vladimirov [1], Wiedemann [83, 85], Zakhoder [1], Zakuyev [4, 11], Zikrillayev [5], Zinjani [1]. Memorial collections and collection of papers: "al-Ṭūsī" [1-3].

E1. Commentary on "Results" (Sharḥ al-Muḥaṣṣal) - Commentary on the work (No 535, E3) of Fakhr al-Dīn al-Razi. Manuscripts of (No 535) are usually found together with the manuscripts of this treatise. Edition: Fakhr al-Dīn al-Razi [1]. Research: Horten [3] (general), Wiedemann [49] (optics).

M1. Exposition of the Book "Elements of Geometry" of Euclid (Taḥrīr Kitāb uṣūl al-handasa li-Uqlīdis) = Exposition of Euclid's "Elements" (Taḥrīr Uṣūl Uqlīdis) = Exposition of Euclid on the Science of Geometry (Taḥrīr Uqlīdis fī `ilm al-handasa) - Alexandria (5198/3), Baghdad (2930-2931), Berlin (5918-5919), Cairo (riyad. 671, 703/2, 1026, Fāḍil 8, 35-36, Taymūr riyāḍa 107, 152), Calcutta (Buhar 463, Madrasa 99), Cambridge (159, Musulm. 1011), Dublin (3649/1, Beatty 4361, 4604), Dushanbe (Ferd. 591), Florence (277), Hyderabad (I 744/1), Istanbul (Atıf 1685; BU 4530, Veliyuddin 2304/2; Kandilli 6; Köprülü 927/4; Millet Feyzullah 1358, 1359/1; NO 2458-2963; Ragıp 215; SM AS 2713/1, 2714-2722, Aşir 221-222, Carullah 1456-1457, Damat 852, Fatih 3438-3441/1, Hamid. 868/1, Kılıç 675, Selim. 726, Yeni Cami T 217-218, 797; TK 3451, 3453/1, 3454/1), Kabul (Archives 307-309, Muza 11), 99), Kastamonu (73), London (974, 1334-1335, Ind. 436/40), Manchester (349, 3486; Lind. 381), Mashhad (5260-5261, 5443-5446, 7483, 8453, 9866; Farhang 25/2, 39/2; Nawwab 4, Univ. 59-61), Mosul (al-Basha 158), Munich (848), Najaf (Ayatallah 135), Oxford (I 949), Paris (2465/6), Patna (108), Princeton (Yehuda 358, 917, 2316, 3769-3770), Kazan (107/2, 1695), Rabat (2453), Rampur (I 409), Rasht (T 22), St. Petersburg (A 258, 671/6; Nat. Firk. 144, Khan. 140-141; Univ. 90/3), Tarim (al-Husayni 26), Tashkent (4854), Tbilisi (K 26, L 281), Tabriz (138), Tehran (26, 32/12, 1577; Mahdawi 458; Univ. 843), Fas (1293; Qaraw. 1367/8, 1369).
Persian translations: Istanbul (SM Yeni Cami 796), London (9336), Rampur (Nadhir 245), Tehran (Mu`tamid 176). Editions: al-Ṭūsī [2, 7]. Russian translation of the proof of Postulate V: Mamedbeyli [7] (13-22). Research: Berozashvili [1-5], Dana Sirusht [1], Dovlatova [1-2], Khalilov [1], Mamedbeyli [7] (22-40), [8] (149-179), Mamedov-Khayyami [2], Murdoch [1], Pont [1] (180), Qasumkhanov [1-2], Rosenfeld [1-2], [27] (71-78), Rosenfeld and Yushkevich [10] (90-91), Safa [1a], Sultanov [1], Thaer [1], Wiedemann [81]. Revision of Euclid's "Elements" in 15 books, contains original proof of Postulate V coinciding with the proof in (No 606, M15) of al-Ṭūsī, but unlike this treatise, to this proof a postulate equivalent to Euclid's postulate is added here, see al-Ṭūsī [5] (4). For the "Book of the Exposition of "Elements" by Euclid" (Kitāb taḥrīr Uṣūl Uqlīdis) ascribed to al-Ṭūsī, see (No 610, M1) Sadr al-Din al-Ṭūsī.

M2. Exposition of the Book "Data" of Euclid (Taḥrīr Kitāb al-mu`ṭayāt li-Uqlīdis) -Berlin (5929, 1867), Cairo (riyad. 704/3, Fāḍil riyāḍa 40/7), Florence (271/3, 273, 286/3), Hyderabad (riyāḍa 383, 405, 437, 469; Salar riyāḍa 21, 32), Istanbul (AM 769/1; Atıf 1712/1, 1786/2; BU Veliyuddin 2321/7; Köprülü 930/1; Millet, Ali Emiri 4431/7; SM AS 2758/4, 7, 2760/6, Beşir 440/1, Carullah 1455/1, 1502/4, Selim. 713 II/64; TK 3453/3, 3456/3, Revanköşk 1997/7), Leiden (1024/1), London (Ind. 743/1), Manchester (348), Mashhad (5257, 5402), Oxford (I 875/3, 895/1), Rampur (I 63), Tabriz (150), Tehran (209/6; Sipahsalar 627, 559; Univ. 2432/1), Vienna (1209/1). Edition: al-Ṭūsī [14] (No I). Research: Thaer [2].

M3. Exposition of the Book "On Measuring Circle" of Archimedes (Taḥrīr Kitāb taksīr al-dā'ira li Arshimīdis) - Ankara (Saib 4186/12), Baghdad (Uvin. 213), Florence (271/5, 286/5), Hyderabad (riyāḍa 383, 437; Salar riyāḍa 21, 32), Istanbul (AM 769/16; Atıf 1712/15, 1716/4; Köprülü 930/7, 931/18; SM AS 2758/1, 2760/4, Beşir 440/17, Carullah 1502/22, Esat 2034/1, Selim. 743 II/I), London (Ind. 743/6), Manchester (350),

Mashhad (5262, 5448; Mawlawi), Najaf (Ayatallah 135), Oxford (I 875/5, 895/13), Paris (2467/9), Rampur (I 63), Tabriz (153), Tehran (209/6; Mu`tamid 120/16; Sipahsalar 461, 559), Vienna (1209/15). Edition: al-Ṭūsī [15] (No 6). Research: Kozhukhova [1].

M4. Exposition of the "Book on Sphere and Cylinder" of Archimedes (Taḥrīr Kitāb al-kura wa'l-usṭuwāna li Arshimīdis) - Berlin (5934, 5934a), Florence (271/4, 286/4), Hyderabad (riyāḍa 383, 405/197-207, 437; Salar riyāḍa 21, 32), Istanbul (AM 769/15; Atıf 1712/15; Köprülü 930/15, 931/17; SM AS 2758/1, 2760/4, Beşir 440/17, Carullah 1502/21, Selim. 743 II/I; TK 3453/14, 3456/17), London (Ind. 734/4, 743/6), Manchester (350), Mashhad (35), New Haven (1485), Oxford (I 875/4, 895/9), Paris (2467/8), Philadelphia (1482), Rampur (I 63), Tabriz (144), Tehran (207/1; Mu`tamid 120/15; Sipahsalar 521), Vienna (1209/14). Edition: al-Ṭūsī [15] (No 5). Research: Kubesov [2-4], Lorch [12].

M5. Exposition of the "Book of Lemmas" of Archimedes (Taḥrīr Kitāb al-ma'khūdhāt li Arshimīdis) - Berlin (5936, 5936a), Cairo (Fāḍil riyāḍa 41/3), Florence (271/12, 286/13), Hyderabad (riyāḍa 383, 405, 437; Salar riyāḍa 21, 32), Istanbul (AM 719/11; Atıf 1712/6; Köprülü 930/12, 931/12; SM AS 2760/18, Beşir 440/12, Carullah 1475/6, Selim. 743 I/6; TK 3453/12, 3456/13), Leiden (162/1), Manchester (348; Lind. 447), Mashhad (5396), New Haven (1486), Oxford (I 875/13, 895/6), Paris (5974), Philadelphia (1483), Rampur (I 63), Tabriz (147), Tehran (205/4; Mu`tamid 120/10; Sipahsalar 522, 559), Vienna (1209/11). Edition: al-Ṭūsī [14] (No 3).

M6. Exposition of the "Book on Moving Sphere" of Autolycus (Taḥrīr kitāb al-kura al-mutaḥarrika li Uṭūluqus) - Aligarh (Azad. Radi al-Dīn 23), Berlin (5932), Bursa (Haraççıoğlu 1159), Cairo (mīqāt 172/3, riyāḍa 704/2, Fāḍil riyāḍa 39/4, 40/4, Taymūr riyāḍa 347/2), Calcutta (Buhar 343/4), Dublin (3649/3), Hyderabad (jadid 268, 4208, riyāḍa 383, 405, 437; Salar riyāḍa 6, 21, 32, 43, 405), Istanbul (AM 769/3; Atıf 1712/3; BU Veliyuddin 2321/4; Köprülü 929/1, 930/2, 6, 931/3; Millet, Ali Emiri 4431/2, Murat 1396/2; SM AS 2758/2, 2759/2, 2760/3, Beşir 440/3, Carullah 1502/8, Selim. 743 II/3; TK 3456/5), London (1346/4; Ind. 744/1), Mashhad (5259, 5450-5451, 6100), New Haven (1487), Oxford (I 875/2, 895), Paris (2467/20), Philadelphia (1485), Rampur (I 63), Tabriz (145), Tehran (208/5; Mu`tamid 0/2, 215/3; Sipahsalar 520; Univ. 849), Vienna (1209/3, 1440/4). Edition: al-Ṭūsī [14] (No 3). Research: Sergeyeva [2].

M7. Exposition of the Book "Spherics" of Theodosius (Taḥrīr Kitāb al-ukar li Thawdhūsyūs) - Baku (B 4274/2), Berlin (5933), Cairo (riyāḍa 704/4, 782/1, Taymūr riyāḍa 347/1), Dublin (3649/4), Florence (271/1, 286/1), Hyderabad (383, 437; Salar riyāḍa 21, 32), Istanbul (AM 769/2; Atıf 1712/2; BU Veliyuddin 2321/3; Köprülü 929/3, 930/5, 931/2; Millet, Ali Emiri 4431/1, Murat 1396/1; SM AS 2758/5, 2759/1, 2760/7, Beşhir 440/2, Carullah 1452/2, 1475/1, 1502/7, Esat 2023/7, Selim. 743 I/I; TK 3353/4, 3456/4), Leiden (1024/2), London (1346/3, Sup. 23, 570/3), Manchester (348), Najaf (Ayatallah 50), New Haven (1495), Oxford (I 875/1), Paris (2467/18), Philadelphia (1485), Rampur (I 63), Tabriz (141), Tehran (205/1, 207/1, 208/4, 2-9/7; Mu`tamid 120/1, 215/2; Sipahsalar 491; Univ. 846), Vienna (1209/2, 1440/3). Persian translations: Hyderabad (riyāḍa 170), St. Petersburg (Nat. Khan. 143). Edition: al-Ṭūsī [14] (No 2).

M8. Exposition of the Book "Spherics" of Menelaus (Taḥrīr Kitāb al-kuriyyāt li Mā-nālāwus) - Aligarh (Azad Radi al-Dīn 49), Baku (B 4274), Berlin (5930-5931, quart. 1867/4), Cairo (riyāḍa 704/5), Florence (271/14, 286/15), Hyderabad (riyāḍa 347, 383, 437; Salar riyāḍa 6, 21, 32, 43, 405). Istanbul (AM 769/4; Atıf 1712/18, 1716/1; Köprülü 930/3, 931/1; Millet, Ali Emiri 4431/3, Murat 1396/3; SM AS 2758/3, 2759/3, 2760/9, Beşir 440/4, Carullah 1455/3, 1502/12, Esat 2023/9, Selim. 743 II/2; TK 3456/6), Leiden (1024/4), Manchester (350), Mashhad (5256, 6101), Tabriz (151), Tehran (207/3, 208/5; Mu`tamid 120/3; Sipahsalar 492), Vienna (1209/4, 1440/5). Edition: al-Ṭūsī [15] (No 10). Research: Krause [2].

M9. Exposition of the "Book of Knowledge on Measuring Plane and Spherical Figures" of Banū Mūsā (Taḥrīr Kitāb ma`rifa misāḥa al-ashkāl al-basīṭa wa'l-kurriyya li Banū Mūsā). All manuscripts are indicated under (No 74, M3). Edition: al-Ṭūsī [15] (No 1). Russian translation by al-Dabbagh: Banū Mūsā [1]. Revision of the work (No 74, M3), Banū Mūsā.

M10. Exposition of the "Book of Assumptions" of Thābit ibn Qurra (Taḥrīr Kitāb al-Mafrūḍāt li Thābit ibn Qurra). All manuscripts are indicated under (No 103, M5). Edition: al-Ṭūsī [9] (No 2). Revision of the work (No 103, M5) of Ibn Qurra.

M11. Exposition of the Book "Conic Sections" of Apollonius (Taḥrīr Kitāb al-Makhrūṭāt li Abulūniyūs) - Cairo (riyāḍa 783), Dublin (Beatty 3076), Istanbul (NO 2972), Leiden (14/1, 1024/5), London (Ind. 745), Oxford (I 943).

M12. On Premises of the Work "Conic Sections" (Fī muqaddimāt kitāb al-Makhrūṭāt) - Oxford (I 943/46, 987/48).

M13. Removal of the Veil from Mysteries of [Figure of] Secants (Kashf al-qinā' `an asrār al-qaṭṭā `) P - Oxford (1498 - anonymous). The work was written in the State of Assassins for the great magister al-Muayyad ibn Ḥusayn, in 5 books: 1) On composed ratios (in proposition 1 the notion of "quantity of a ratio" is introduced, for ratio $\frac{A}{B}$ it is quantity Q such that $\frac{Q}{1}=\frac{A}{B}$, therefore these quantities are equivalent to our real numbers, and the quantity of a ratio composed from two ratios is equal to product of quantities of quantities of these ratios. 2) Theory of plane figure of secants (plane complete quadrilateral) and proof of the Menelaus theorem for this figure. 3) introduction to the theory of spherical figure of secants (spherical complete quadrilateral). 4) Proof of the Menelaus theorem for spherical figure of secants. 5) "methods replacing figure of secants", that is, spherical theorems of sines and tangents and solution of spherical triangles by three known elements for all six cases, for triangles with three known angles - by means of polar triangle.

M14. Removal of the Veil from Mysteries of Figure of Secants (Kashf al-qinā` an asrār al-shakl al-qaṭṭā `) = Treatise on Secants in the Science of Geometry (al-Risālat al-qaṭṭā ` fī `ilm al-handasa) = Treatise on Plane and Spherical Figure of Secants (Risāla fi'l-shakl al-qaṭṭā ` al-saṭḥī wa'l-kurī) = Book of the System of Assertions on Figure of Secants and Their Proofs (Kitāb ḍābt da`āwī al-shakl al-qaṭṭā ` wa barāhinihī) - Aligarh (Azad Radi al-Dīn 48 - under the last title), Berlin (5956), Hyderabad (riyāḍa 57, 405 - under the first and fourth titles; Salar riyāḍa 13 - under the third title), Istanbul (AM 76; Atıf 1712; Köprülü 931; SM AS 2760, Beşir 440, Carullah 1502, Selim. 743), Mashhad (3990, 5591), Oxford (I 2467), Paris (2467/10, 11), St. Petersburg (Nat. Khan. 144/19), Tehran (209/8; Mu`tamid 120/16). Only the Persian Oxford manuscript and the Arabic Tehran manuscript 209/8 have the first title, all other manuscripts have the second title, the first title is mentioned also in KZ (212-213).

Edition of the Arabic manuscript in the library of Edhem Pasha, Istanbul, with French translation by Carathéodory: al-Ṭūsī [10]. Russian translation of the same text by Mamedbeyli, Riznichenko and Rosenfeld: al-Ṭūsī [18]. Research: Abdulqasumova [2], Braunmühl [1], Khalilov and Mamedbeyli [1], Khayretdinova [8], Mamedbeyli [7], Mamedbeyli and Hashimzade [1], Qasumkhanov [1], Rosenfeld [1-2]. Arabic version of M13 was written in 1260 in Maragha. In both works M13 and M14 the trigonometric treatise (No 593, M4) of al-Sālār is sometimes mentioned. M13 that was written before al-Ṭūsī and al-Sālār met shows great respect but M14 which was written after they became rivals contains an irritating critique. Apparently al-Ṭūsī composed this version to diminish al-Salar's scientific reputation. This may have been used as a pretext to justify al-Salar's execution in 1262 for his "Baghdad prophecy" (see Rashīd al-Dīn (No 656) [2], 59).

M15. Treatise on Salvation from Doubts about Parallel Lines (al-Risāla al-shāfiya `an shakk fi'l-khuṭūṭ al-mutawāziyya) = Proof of the Postulate Known to Scientists (Bayān al-muṣā-dara al-mashhūra li'l-ḥukamā') = Explanation of the Known Postulate of the Work "Elements" with Exposition of its Established Proof (Sharḥ al-muṣādara al-mashhūra li kitāb al-Uṣūl ma` dhikr al-barāhīn allatī uqīmat `alayhā) - Aligarh (Azad `Abd al-Hayy 640/17 - under the second title), Berlin (5942), Florence (298), Hyderabad (riyāḍa 327 - under the last title), Istanbul (Atıf 1712/13; Köprülü 931/15; SM 2760/1, Carullah 1502/1, Fatih 3440/2; TK 3342/10, 3456/1), Mashhad (82), Paris (2467/5), Rampur (I 417), Tehran (Mu`tamid 120/20; Sipahsalar).

Edition of the Rampur manuscript: al-Ṭūsī [15] (No 8). French translation: Jaouiche [4] (201-226). Russian translation by Rosenfeld: al-Ṭūsī [24]. Research: Hashtrudi [1], Jaouiche [4] (99-106), Pont [1] (177-179), Rosenfeld [21] (71-77), Rosenfeld and Yushkevich [2], [10] (90), Sabra [1], Smith [1]. Exposition of attempts to prove Postulate V by al-Jawharī (No 43), Ibn al-Haytham (No 328, M12) and Khayyām (No 420), and of the attempt of al-Ṭūsī himself. In his exposition Khayyām's postulate equivalent to that of Euclid's is ommitted, his own proof also is not based on such postulate. However after the correspondence of al-Ṭūsī with al-Ḥanafī (No 583), al-Ṭūsī added such a postulate and in this form included the proof in his work (No 606, M1).

M16. Abridgement of " al-Shāfı " (Talkhīṣ al-Shāfī) - Mashhad (390). Abridgement of M15.

M17. Collection of Arithmetic by Means of Board and Dust (Jāmi` (Jawāmi`) al-ḥisāb bi'l-takht wa'l-turāb) - Berlin (5973), Escorial (II 973/2), Istanbul (AS 2728; TK 3455/3), Mashhad (5270), Patiala (3 copies), Princeton (Yehuda 4449), St. Petersburg (Univ. 90/5), Tashkent (8990/6). Persian version - Patiala (Kapurthala). Description of the Escorial manuscript: Derenburg [7] (125). Edition by Sa`idan: al-Ṭūsī [28]. Russian translation of the chapter on extraction of roots and binomial formula by S. Ahmedov and Rosenfeld: al-Ṭūsī [25]. Research: S. Ahmedov [1-2], Matviyevskaya and Tllashev [6] (105-111), Sa`idan [7], Tllashev [1].

Treatise in 3 chapters: 1) arithmetic of integers, 2) arithmetic of usual fractions, 3) arithmetic of sexagesimal fractions. Reckoning is realised on a reckoning board covered by dust, all intermediate reckons are deleted. Chapter 1 contains description of extraction of roots of any power, it is the first extant description of such

extractio coinciding with Ruffini-Horner method (possibly, this method was described in the work (No 420, M4) of Khayyām). Here the binomial formula for $(x+y)^n$ known to al-Karaji (No 309, M3) is also exposed: the approximate value of n-th root from $A=a^n+b$ is found in the form $a + \frac{b}{(a+1)^n - a^n}$.

M18. Book on Multiplication and Division (Kitāb al-ḍarb wa'l-qisma) P - Istanbul (TK 3327/3). 3 chapters coinciding with 3 chapters of M17. Perhaps, it is the Persian version of M17.

M19. Treatise on Arithmetic Problems and Algebra and Almucabala (Risāla fi'l-masāil al-ḥisābiyya fi'l-jabr wa'l-muqābala) - Damascus (7990). Treatise in 2 chapters: 1) on arithmetic, 2) on algebra.

M20. Treatise on Arithmetic and Algebra and Almucabala (Risāla fi'l-ḥisāb wa'l-jabr wa'l-muqābala) P - Tehran (Mahdawi 306/13). Perhaps, it is the Persian version of M19.

M21. Uses of al-Ṭūsī in Algebra and Almucabala (Fawāid-i Ṭūsī dar jabru muqābala) P - Tashkent (7235/4), Tehran (Univ. 2452/6, Ilah. 251/2). Description of the Tashkent manuscript: Tllashev [3]. Research: Tllashev [6], where it is proved that this treatise is the last chapter of M19.

M22. Treatise on Proving the Impossibility of a Square Number being the Sum of two Odd Square Numbers to be a Square Number (Risāla fī (bayān annahu) lā yumkinu an yajtami`a min `adadayn murab-ba`ayn `adad murabba`) - Berlin (6008/2), Cairo (riyāḍa 703/4), Istanbul (SM Carullah 1502/26), London (Ind. 1043/4), Paris (2467/14).

M23. Hundred and Five Problems from Euclid's "Elements" (Mi'at mas'ala wa khamsa min Uṣūl Uqlīdis) - Cairo (riyāḍa 703/3).

M24. Commentary on "Propositions of Substantiation" (Sharḥ-i Ashkāl al-ta'sīs) P - Hyderabad (riyad 405/244-248). Commentary on the work (No 655, M1) by al-Samarkandi.

M25. [Answer to al-Hanafi] - Aligarh (Azad. Sul. 155/5). Answer to al-Hanafi's letter (No 583, M1).

M26. Comments to Euclid (Ḥawāshī `alā Uqlīdis) - are mentioned in (No 686, HS1) by al-Naysaburi.

M27. Book of Victory in Algebra and Almucabala (Kitāb al-ẓafar fi'l-jabr wa'l-muqābalā) - is mentioned in KZ (V 113).

M28. On Motion of Rolling and Ratio between Straight and Curved Lines (Fī ḥarakat al-daḥraja wa'l-nisba bayna mustawī wa munḥanī). Commentary by al-Shirāzī (No 668, M5), where the name of al-Ṭūsī, the author of this treatise was not mentioned directly but was mentioned as "the king of scholars and sultan of researchers" coinciding with epithets in (No 686, HS1) of al-Naysabūrī. Fragments extant in commentary by al-Shirāzī and their Russian translation see: al-Shirāzī [4]. Al-Kutubī [1] (II 188) mentions also mathematical treatises of al-Ṭūsī:

M29. Projecting the Sphere onto a Plane (Tasṭīḥ al-kura).

M30. Inheritance According to the Opinion of Ahl al-Bayt (al-Farāiḍ `alā madhhab ahl al-bayt). "Ahl al-Bayt" are the household and descendants of Prophet Muhammad. Al-Kutubī also ascribes to al-Ṭūsī treatises "Quadrature of Circle" (Tarbi` al-dā'ira),"Cylinder"(al-Usṭuwāna),"Suppressings"(al-Qaṭi`āt), "Phenomena" (al-Ẓāhirāt), and "Rulers" (al-Masāṭir) which undoubtedly coincide with al-Ṭūsī's expositions of "On Measuring Circle" and "On Sphere and Cylinder" of Archimedes (M3 and M4) and "Data", "Phenomena", and "Optics" of Euclid (M2, A2, and Ph1), see Wiedemann [87] (368-370).

A1. Exposition of "Almagest" (Taḥrīr al-Majisṭī) - Aligarh (Azad. `Abd al-Hayy 629/6; Sul. 164/24, 165/25, 174/34, Shaifta 38/1), Baku (M 428), Cairo (falak 3822, 8530, hay'a 17, Ṭal`at hay'a 43), Calcutta (Buhar 124, 344), Dublin (3637), Hyderabad (riyāḍa 85, 87, 405), Istanbul (BU Veliyuddin 2302/2; Köprülü 932, 933/1; Millet Feyzullah 1360-1361; NO 2941/1 (copied by al-Shirāzī, No 668); Ragıp 913-914; SM AS 2572, 2583/1, Carullah 1458, Esat 2007, Selim. 727, Yeni Cami T 219, 798; TK 3456/18), London (Ind. 741/1), Jaipur (19), Mashhad (5452-5457; Nawwab 3), Mosul (al-Basha 353), Kazan (108), Patna (2444/6), Princeton (Yehuda 34, 3119), Rampur (hay'a 7, 10, 741/1), St. Petersburg (A 1286, B 810, C 614, D 172; Nat. Khan. 139), Tehran (33/2, 4555; Senat 2248; Sipahsalar 523), Tunis (Sadiq. 1455), Yazd (Waziri 793), Vienna (1804). Persian translations: Aligarh, Calcutta (1084), Patna (1058). Research: Abdulqasumova [1-2], Abdulqasumova and Huseynova [1], Kunitzsch [7] (47- 48).

A2. Exposition of the Book "Celestial Phenomena" of Euclid (Taḥrīr kitāb Ẓāhirāt al-falak li Uqlīdis) - Berlin 5645-5646, quart. 1867/7), Cairo (Fāḍil riyāḍa 41/30), Hyderabad (riyāḍa 327, 383, 405, 437; Salar riyāḍa 21, 32), Istanbul (AM 769/6; Atıf 1712/5, 1716/3; BU Veliyuddin 2321/5; Köprülü 930/4, 931/7; Millet, Ali Emiri 4431/5; SM AS 2760/12, Beşir 440/7, Carullah 1302/14, Esat 2023/11, Selim. 743 II/7; TK 3453/9), London (Ind. 743/3), Manchester 9350), New York (Columb. 305/6), Oxford (I 875/9, 895/3), Rampur (I 63), Tabriz (143), Tehran (Mu`tamid 120/4; Sipahsalar 559, 597; Univ. 2432/6), Vienna (1209/6). Edition: al-Ṭūsī [15] (No 6).

A3. Exposition of the "Book of Risings and Settings" of Autolycus (Taḥrīr kitāb al-ṭulū' wa'l-ghurūb li Uṭūlūqus) - Aligarh (Azad. `Abd al-Hayy 639/16), Cairo (Fāḍil riyāḍa 41/1), Florence (271/7, 286/8), Hyderabad (riyāḍa 383, 405, 437, 469; Salar riyāḍa 21, 32), Istanbul (AM 769/8; Atıf 1712/8, 1716/7; Köprülü 930/9, 931/9; SM AS 2760, Beşir 440/9, Carullah 1502, Selim. 743 I/3; TK 3456/11), London (Ind. 743/4), Oxford (I 875/8, 895/2), Rampur (I 63), Tabriz (142), Tehran (209/1; Mu`tamid 120/6; Sipahsalar 489; Univ. 848), Vienna (1209/3). Edition: al-Ṭūsī [15] (No 7).

A4. Exposition of "Book on the Sizes of the Sun and the Moon and the Distance between Them" by Aristarchus (Taḥrīr kitāb fī jirmay al-nayyirayn wa'l-bu`d baynahumā li Arisṭarkhus) - Aligarh (Azad. Sul. 151/11), Cairo (Fāḍil riyāḍa 41/31), Cambridge (Sup. 1004), Florence (271/10, 286/11), Hyderabad (riyāḍa 383, 405, 437, 469; Salar riyāḍa 21, 32), Istanbul (AM 769/10; Atıf 1712/10, 1716/6; Köprülü 930/11, 931/11; SM AS 2760/16, Beşir 440/11, Carullah 1502/19, Selim. 743 I/5), Kabul (Archive 240), London (Ind. 244/4), Oxford (I 875/11, 895/5), Rampur (I 63), Tabriz (140), Tehran (Mu`tamid 120/8; Sipahsalar 488), Vienna (1209/10). Edition: al-Ṭūsī [15] (No 4).

A5. Exposition of the "Books of Days and Nights" by Theodosius (Taḥrīr kitāb al-Ayām wa'l-layālī li Thawdhūsyūs) - Aligarh (Azad. `Abd al-Hayy 638/15; Sul. 148/3), Berlin (5648), Florence (271/9, 286/10), Hyderabad (riyāḍa 327, 383, 405, 437; Salar riyāḍa 21, 32), Istanbul (AM 769/7; Atıf 1712/7; Köprülü 930/8, 931/8; SM AS 2760/13, Başir 440/8, Selim. 743 I/2; TK 3453/8, 3456/10), London (1346/5; Ind. 744/3), Mashhad (176), New Haven (1482), Oxford (I 875/10, 895/4), Philadelphia (1486), Rampur (I 63), Tabriz (146), Tehran (Mu`tamid 117/1, 120/5; Sipahsalar 487), Vienna (1209/7). Edition: al-Ṭūsī [14] (No 7).

A6. Exposition of the "Book of Settlements" of Theodosius (Taḥrīr kitāb al-Masākin li Thawdhūsyūs) - Berlin (5649. quart. 1867/5), Cairo (riyāḍa 897/2, Fāḍil riyāḍa 40/5), Florence (271/6, 286/7), Hyderabad (riyāḍa 383, 437; Salar riyāḍa 21, 32), Istanbul (AM 769/17; Atıf 1712/6; BU Veliyuddin 2321/6; Köprülü 931/5; Millet, Ali Emiri 4431/6; SM AS 2760/10, Beşir 440/5, Selim. 743 II/5; TK 3453/6, 3456/7), Leiden (513/3), London (1346/6, Sup. 23570/6; Ind. 744/2), Manchester (348), Mashhad (5401, 6119), New Haven (1483), Oxford (I 875/7, 895/11), Philadelphia (1487), Rampur (I 63), Tehran (205/2, 208/3, 209/2; Mu`tamid 120/9; Sipahsalar 524), Vienna (1440/1). Edition: al-Ṭūsī [14] (No 4).

A7. Exposition of the "Book of Ascensions" of Hypsicles (Taḥrīr kitāb fī'l-Maṭāli' li Ibsiqlāus) - Aligarh (Azad `Abd al-Hayy 645/22), Berlin (quart. 1867/10), Cairo (Fāḍil riyāḍa 41/2), Florence (271/11, 286/12), Hyderabad (riyāḍa 383, 405, 437, 469; Salar riyāḍa 21, 32), Istanbul (AM 769/9; Atıf 1712/9; Köprülü 930/10, 931/10; Millet, Ali Emiri 4431/6; SM AS 2760/15, Beşir 440/10, Carullah 1502/16, Selim. 743 I/4, II/9; TK 3456/12), Leiden (162/2), London (Ind. 743/5), Manchester (350), Mashhad (177, 185; Mawlawi 442/10), Oxford (I 875/12, 895/12), Rampur (I 63), Tabriz (149), Tehran (Mu`tamid 120/7; Sipahsalar 525), Vienna (1209/9). Editions: al-Ṭūsī [15] (No 8), Hypsicles [1].

A8. Ilkhanid Zij (Zīj-i Ilkhānī) P - Baku (M 221), Berlin (336), Bombay (43, 50/2), Cairo (mīqāt 167/4, mīqāt farsi 1, Fāḍil farsi 5/3 - a fragment), Cambridge (Browne 0. 2), Florence (Laur. 269), Hyderabad (riyāḍa 306), Istanbul (Kandilli 21; NO 2933; SM Hamid. 846; TK 3502/1, 3513/1), Leiden (1181), London (5572, 7464, Sup. 7698; II 454a), Mashhad (104-106, 5331-5333), Oxford (1513), Paris (169, 779, 2365), Rome (Vat. 83), Tehran (Univ. Adab. 165), Yazd (Yazdi 283). Arabic translation: Sofia (1218). Latin translation of geographical tables by Graves: al-Ṭūsī and Ulugh Beg [1]. Research: SIAT (161-162); Kennedy [15], Mamedbeyli [8] (35-89), [9], Mercier [2] (41-45). The Zij was written in Maragha by the order of Hulagu Khan (1256-1265) finished in 1270. It was dedicated to Hulagu Khan's successor Abaqa (1265-1282).

A9. Treatise on Astronomy for Mu`in al-Dīn (al-Risāla al-Mu`īniyya fī `ilm al-hay'a) P - Aligarh (Azad. `Abd al-Hayy 112/5; Subh. 520/6; Sul. 531/10), Berlin (329/1, 330/2), Bombay (Firuz 71), Cairo (hay'a 111, hay'a farsi 1, riyāḍa 898/29), Calcutta (Curz. 400, 575), Cambridge (Browne Sup. 686), Hyderabad (riyāḍa 413, 441, 589; Nizam. tibb 536; Salar hay'a 8), Istanbul (SM AS 5670/1, 4844, Fatih 5302/4), Lahore (Univ. 19/1), London (Ind. 268), Mashhad (93, 5320; Mawlawi 523/1), Oxford (2043), Patna (2043), Kazan (139), Rampur (1176), Rome (Vat. 1398/4), St. Petersburg (Univ. 197), Shiraz (Shah-Chiragh 676/2), Tashkent (465/3, 3894/4, 8990/2), Tehran (178, 212, 2065/1, 2139, 2254/2, 2438/1, 2455/1; Ma`arif 1248; Malik 3503, 5740; Senat 2804/3; Sipahsalar 581; Univ. 1014/1, 1094/1, 1278/1, 1346/1). Edition by Danish-Pazhuh: al-Ṭūsī [19]. Research: Kennedy [41], Ragep [7], A. Usmanov [2]. Treatise in 4 chapters: 1) principles of geometry and physics, 2) celestial spheres and bodies, 3) the Earth, 4) sizes of the Earth and celestial bodies and their distances from the Earth . The treatise was written in the State of Assassins and dedicated to Mu`īn al-Dīn Abū'l-Shams, son of the author's patron Nāṣir al-Dīn `Abd al-Raḥīm, the Assassin governor of Kuhistan.

A10. Naṣīr [al-Dīn]'s Memoir on Science of Astronomy (al-Tadhkira al-Naṣīriyya fī `ilm al-hay'a) - Aleppo (Ahmad. 1284), Aligarh (Azad. Habib 44/13b, Subh. 121/3, 520/3), Baghdad (2958), Berlin (5681), Cairo

(falak 3957/3, hay'a 51, Tal`at hay'a 38/1, Taymūr majlis 181/1; Azhar 18079/1), Diyarbakır 2213A/8), Edirne (Selim. 1244/3), Florence (277), Heidelberg (A4 144), Hyderabad (Said. hay'a 1), Istanbul (Millet, Ali Emiri 2735, Feyzullah 1330/1, 1331; Ragıp 919/2; SM Aşir Hafid. 203/2, Carullah 1457/2, Fatih 3388-3389, 1331. Laleli 2115-2116; TK 3456/19, 7005, 7081, 7082/1), Leiden (188/4, 637, 689, 905), Leipzig (261/1), London (1339/1, 1342/3; Ind. 746-747), Los Angeles (Univ. 1117), Manchester (Lind. 457), Mashhad (8568), Najaf (Ayatallah 1099), Oxford (I 1018, II 292, Layell 100/1), Paris (2330/8, 2509, 2510). Princeton (Garr. 4881; Yehuda 918), Rome (Vat. 319/1), St. Petersburg (A 437 - incomplete), Tashkent (8990/1), Tehran (Najmabadi; Sipahsalar 4727; Univ. Ilah. 275G). Edition with English translation and commentary: Ragep [3]. French translation of the chapter on celestial spheres: Carra de Vaux [3]. Photo-reproduction of two pages of Cairo manuscripts: SSM (227). Research: Carra de Vaux [3], Hartner [16], Kennedy [3], Leaman [1]. Livingston [2] (263-271), Mamedbeyli [6] (73-75), Ragep [1-2], Ramazanova [1], Saliba and Kennedy [1], Veselovskiy [1-2]. Arabic version of A9, written in Maragha.

A11. Essence of Knowledge of Astronomy of Celestial Spheres (Zubdat al-idrāk fī hay'at al-aflāk) P - Cairo (hay'a 50 - anonymous, mīqāt 5-7, riyāḍa 898/1), Istanbul (NO 2931/1; SM AS 3730/2; TK 3430/5, 3455/6), Leiden (1183), Madras (Firuz 44), Paris (2511/1 - anonymous), Tehran (180; Senat 2804/2). Arabic translations: Dublin (Beatty 4933), London (Sup. 763/2), Princeton (Yehuda 4066).

A12. Question and Answer (Pursish u pāsukh) P - Tehran (2938/19, Univ. 1036/9).

A13. Treatise of Nasir al-Dīn (Risāla-yi Naṣīriyya) P - Mashhad (5938).

A14. Treatise in Twenty Chapters on Knowledge of Astrolabe (Risāla-yi bīst bāb dar ma`rifat-i asṭurlāb) P - Aligarh (Azad. Sul. 532/11, 535/14, Qutb. 77/5), Baku (B 413/2, 648/5, 1130/1, M 95/3, V 2837/1), Berlin (22/1), Bombay (Firuz 40/5, 60/2), Cairo (Ṭal`at majlis 966/5, mīqāt 255/3), Calcutta (1484, Curz. 396, 568; Buhar 225), Copenhagen (17/3), Dhaka (117/7), Dushanbe (471/2; Ferd. 877), Gotha (38), Hamadan (Kamali 386/5), Hyderabad (jadid. 26175, 4815, 9149; riyāḍa 113, 137, 149/1, 159, 189, 324. 330/1, 392/1, 406, 534, Osm. 520a, 523/41, 1175; Salar hay'a 34/1, 35), Isfahan (5127/2), Istanbul (Kandilli 50; SM AS 2617/1, 2624/1, 2821/1, 4878/11, Fatih 5330/2, Laleli 3674/2,), Kabul (Matb. 217/33), Kapurthala, Lahore (Univ. 2 copies), London (453a, 853b, 1585, 5734/2, Sup. 155/2; Ind. 707/1, 2254/2), Madras (636), Manchester (Lind. 716c, 717b), Mashhad (14-15, 19, 2925/6, 5241, 5246; Farhang 12/1; Gauharshad 391/1, 559/2, 577/9, 933/2, 1083/3, 1143/1, 1774/2; Mawlawi 13/5, 452/3, 520/2; Nawwab 2; Univ. 49), Oxford (I 287, 1503-1505), Paris (772/1, 2371), Patna (1724-1725), Rampur (1180-1182, 3010), St. Petersburg (A 254, 268, B 3059, 4295, 4375; Nat. 128/1, 130/7, 317/2, Khan. 124/1, 138/7), Tashkent (1207/4, 3042/2), Tbilisi (217/384), Tehran (61/1, 156, 206/7, 1233/9, 2439/2, 2452/1, 2976/2, 3186/1, 3382/2, 3763/1, 4567, 4781, 5001/2, 5077/18, 5391/9, Malik 3110, 3402/4, 3437/4, 5718/2, 6099/1; Ma`arif 332, 1368/1; Mahdawi 282/25, 462/1; Mu`tamid 3/5; Sipahsalar 698/2, 700/1, 957/5, 3877/3, 7386/1; Univ. 888/4, 2086/5, 2788/2, 3059/3, 3511/25, 4029, 4567, Adab. 41, 93/2, 121/2, 207, 272, 359, Ilah. 99/4, 242, 710/3), Yazd (Jami` 439/1, 10099/3),
Descriptions of the Tashkent manuscripts: SVR (I 224, V 319). Sanskrit translation: Yantra-rāja risala "Bisa Bāba" Sk. Description of this manuscript: Pingree [6] (III 145). Editions: al-Ṭūsī [5], by Rizawi: al-Ṭūsī [22]. Research: Mamedova [1]. Treatise in 20 chapters on the use of astrolabe.

A15. Treatise on Properties of Knowledge on the Use of the Astrolabe (Risāla fī kayfiyyat-i isti`lām istifā'-i asṭurlāb) P - Aligarh (Azad. Radi al-Dīn 42/22), Hyderabad (jadid 4203/2).

A16. Thirty Chapters on Knowledge of the Calendar (Sī faṣl dar ma`rifat-i taqwīm) P - Aligarh (Azad. `Abd al-Hayy 133/26; Habib 44/7; Subh. 14), Baku (A 36, B 413/1), Bombay (Firuz 42), Cairo (huruf 89/5, lughat 4382, 4485/2, Tal`at mīqāt 133/4), Calcutta (Buhar 224), Dhaka (326), Dushanbe (125; Ferd. 384; IZA 202/2), Hyderabad (riyāḍa 28, 30, 330/2; Osm. 473; Said. hay'a 36; Salar hay'a 28, 30-31, 36), Isfahan (128/5), Istanbul (BU Veliyuddin 2269/2; Köprülü 1589; NO 2931/2; Ragıp 931/1; SM AS 2621/2, 2732/2, Laleli 2736; TK 3327/1), Leiden (1178), London (452, 811a, 854b, 7700, 2369/3, 11137/1, Sup. 7700; Ind. 1230/3, 2254/3, 3071), Mashhad (112, 180, 5339, 5408, 5561, 6354, 6804; Gauharshad 467/1, 577/2, 1083/1, 1136/2; Mawlawi 36/5, 467/1, 527/3; Univ. 195, 297-298), Oxford (925, 1511-1512; Eton 12), Paris (52, 368/7, 778, 2036, 2363/2, 2404, 2435), Rampur (1177b, 1177d, 1177j, jadid 1603), Rome (Vat. 12/3; Barb. 102/1), Tashkent (1206/4, 3042/1, 3852/4, 8990/4), Tbilisi (AS 534/3, K 107/143), Tehran (160, 206/1, 612, 1918/3, 2008/1, 2388/2, 2421, 2444, 2793/6, 2794, 2926/2, 3117/3, 3383, 4998; Dihkhuda 219; Malik 2522/3, 3117/1, 3235, 3382, 6813/2; Mahdawi 261/1, 267/3; Milli 401/1; Mu`tamid 115/5; Senat 2328/1; Sipahsalar 580/2, 600/2, 633-634; Univ. 901, 1402/1, 2093/4, 3811/1, Adab. 110/1, 207/3, 352/2, Ilah. 60/2, 177/1, 190/2, 460/1, 516/2, 537, Piz. 219, 271), Vienna (1424/1), Yazd (Jami` 292/2; Waziri 890, 893/2).
Arabic translation: Tehran (Muza 4330/4). Turkish translation: Bakhchesaray (325). Description of the Tashkent manuscripts: SVR (V 319). Edition: al-Ṭūsī [11]. The work was written in the State of Assassins. Treatise in 30 chapters: 1) on literal numeration, 2-6) on calendars and eras including "Maliki" - calendar of Khayyām, 7-16) on the Sun, the Moon, and the planets, 17-30) on astrological problems.

A17. Concise [Book] on the Science of Astrology and Knowledge of the Calendar (Mukhtaṣar fī `ilm al-tanjīm wa ma`rifat al-taqwīm) - Aligarh (Azad. Radi al-Dīn 44), Berlin (5679), Cairo (huruf 89/5, Fāḍil riyad 180/1, Ṭal`at majlis 966/4, mīqāt 180 - all three anonymous), Istanbul (Köprülü 1589; Ragıp 932/1; SM AS 2617/2, 2687/1, Yeni Cami 1176/18), London (394, 395/1), Oxford (301), Princeton (Yehuda 1066, 4296), Rome (Vat. Sbath 820/2), St. Petersburg (A 834), Tashkent (1206/2, 5, 3042/1, 4201/13, 11493/1), Tbilisi (574), Tehran (4812). Arabic version of A16 written in Maragha. Research: Dizer [4].

A18. Treatise on the Sine-Quadrant (Risala rub` mujayyab) - Mashhad (Farhang 23/1).

A19. Treatise to Be Added to the Treatise for Mu`īn al-Dīn (Risāla muta`allaqa risāla Mu`īniyya) = Supplement to the treatise for Mu`īn al-Dīn (Dhayl-i risāla-yi Mu`īniyya) P - Aligarh (Subh. 520/21 under the first title), London (Ind 269), Oxford (2839); the second title is mentioned in (No 686, HS1) of al-Naysaburi.

A20. Resolution of Difficulties [in the Treatise] for Mu`in al-Dīn (Ḥall-i mushkilāt-i Mu`īniyya) P - Aligarh (Azad. Subh. 24), Istanbul (2670/2; SM Fatih 2305/2), St. Petersburg (Univ. 197/2), Tehran (180/2; Senat 2804/4; Univ. 882). Edition: al-Ṭūsī [20]. Research; Ragep [2].

A21. Commentary on Treatise for Mu`in al-Dīn (Sharḥ-i risāla-yi Mu`īniyya) P - Aligarh (Azad. `Abd al-Hayy 113/6), Hyderabad (riyāḍa 412; Salar hay'a 4), Oxford (2839), Rampur (1177).

A22. The Rule (Qā`ida) - Tashkent (436/1). Description of the manuscript: SVR (I 223). Treatise on determining the beginnings of lunar months. Perhaps it is a revision of the Rule in the treatise (No 1, A1) of orthodox Caliph `Alī ibn Abī Ṭālib.

A23. Treatise on Principles of Phases of the Moon (Risāla fī awā'il faṣl al-qamar) - Hyderabad (riyāḍa 327).

A24. Essence of Astronomy (Zubdat al-hay'a) - Aligarh (Azad. `Abd al-Hayy 114/7), Hyderabad (riyāḍa 414), Rampur (2843), Tbilisi (AC 534/1 - anonymous).

A25. Treatise on the Astrolabe (Risāla-yi dar usṭurlāb) P - Patna (1725). Short treatise, differs from A14.

A26. Selections on Stars (Ikhtiyārāt al-nujūm) P - Najaf (Khwansari).

A27. Selections on the Moon in Twelve Zodiacal Signs (Ikhtiyārāt-i qamar fī burūj-i ithnay `ashara) = Selections on the Movement of the Moon (Ikhtiyārāt-i masīr al-qamar) P - Istanbul (BU 2269/1; (SM AS 2620/2), London (Ind 1762/24). Oxford (1512/2).

A28. Introduction [to Astronomy and Astrology] in Verses (Madkhal-i manẓūm) P -Calcutta (Curz. 645), Hyderabad (riyāḍa 77), Istanbul (BU 2269/1; SM AS 2701/1, 4840/3, Fatih 2429, Laleli 3674/7), London (871a; Ind. 2254), Madras (500). Edition: al-Ṭūsī [5] (on the margin).

A29. Treatise on Determining the Azimuth of Qibla (Risālat samt al-Qibla) - is mentioned in (No 686, HS1) by al-Naysaburi.

A30. Treatise on Determining the Azimuth of Qibla in Tabriz (Risālat samt al-Qibla Tabrīz) - is mentioned in (No 686, HS1) by al-Naysaburi as a treatise differing from A29.

Me1. [Exposition of] the Book of Euclid on Gravity and Lightness and Comparison of Some Bodies with Others (Kitāb Uqlīdis fī'l-thikl wa'l-khiffa wa qiyās al-ajrām ba`ḍuhā ilā ba`ḍin) - London (Ind. 744/6).

Ph1. Exposition of the "Book of Optics" of Euclid (Taḥrīr kitāb al-Manāẓir li Uqlīdis) - Aligarh (Azad `Abd al-Hayy 636/13, Sul. 146/6), Ankara (Saib 4186), Berlin (6016-6017, quart. 1867/6), Cairo (riyāḍa 897/3, Fāḍil riyāḍa 40/6, Tal`at riyad, 102/5), Florence (271/8, 286/9), Hyderabad (jadid 4198, riyāḍa 327, 383, 405, 437, Sh. 760; Salar riyāḍa 21, 32), Istanbul (AM 769/5; Köprülü 931/6; NO 2064; SM AS 2760/11, Atıf 1712/4, 1716/8, Beşir 440/6, Carullah 1455/4, Esat 2023/10, Selim. 743 II/6; TK 3453/7, 3456/8, Khaz. 603/2), Leiden (513. 3, 897/3), London (Ind. 748/2), Mashhad (6102, 6104), Oxford (I 875/6), Paris (5974), Princeton (Yehuda 1553), Rampur (I 63), Tabriz (154), Tehran (208/2; Sipahsalar 529), Vienna (1209/5, 1440/2). Editions: al-Ṭūsī [6] (No 8), [26]. Partial German translation: Rosenthal [6] (287-288).

Ph2. Treatise on Reflection and Refraction of Light Rays (Risāla fī in`ikās al-shu`ā`āt wa in`iṭāfihā) - Aligarh (Radi. 42/10), Berlin (6020), Cairo (falak 3957/2), Hyderabad (jadid 4195, riyāḍa 327, 469), Istanbul (Köprülü 927/2; SM AS 2587/7, Fatih 3387/4), Kabul (Matb. 6/II 41, 217/59), Manchester (Lind. 447/1), Tehran (Sipahsalar 314). Photo-reproduction of the Berlin manuscript: Mamedbeyli [6] (187-188). English translation and research: Winter and Arafat [2]. German translation and research: Wiedemann [92].

Ph3. Rainbow (Qaws-i quzaḥ) P - Tehran (Malik 4681/23, 6192/8; Univ. 487/1, 4100/35).

Ph4. Treatise on Hot and Cold (Risāla fī'l-ḥarr wa'l-burūda) - Tashkent (562/8). Description of the manuscript: SVR (I 222). Research: Zikrillayev [5].

Ph5. Gift to Observers (Tuḥfat al-nāẓirīn) P - Rampur (788).

Ph6. [Letter to Najm al-Dīn al-Katibi] - Berlin (5671, appended to a manuscript of the work (No 485, E1) of al-Baghdādī, London (980/17). Letter to al-Qazwīnī (No 616) containing comments on physics of Ibn Sīnā (No 317) and a reasoning on origin of colours. Research: Wiedemann [96].

Mu1. Book on Music (Kitāb fi'l-mūsīqā) - is mentioned by al-Kutubī [1] (II 150).

Mi1. Ilkhanid Mineralogy (Tansūq-nāma-yi īlkhānī) = Book on Precious Stones (Jawāhir-nāma) P - Bombay (Firuz 1), Cambridge (Browne 29/9, 38/8, 1490/3), Glasgow, Istanbul (BU Veliyuddin 2542), Leiden (1291), London (Sup. 157), Paris (832), St. Petersburg (Univ. 1110), Tehran (706). Edition of chapters 8-12: Binash [1] (190-197). Research: Binash [1], Efendiyev [1], Qasumi [1], Ritter [3]. The work was written in Maragha and dedicated to Hulagu Khan.

PH1. Ethics of Nasiri (Akhlāq-i Nāṣirī) P. Editions: al-Ṭūsī [3a, 7b]. English translation by Wickers: al-Ṭūsī [27]. Azerbaijani translation by R. S. Sultanov: al-Ṭūsī [29]. Research: Eyvazov [3], M. S. Sultanov [1] (literary analysis), R. S. Sultanov [1] (general research), Zakuyev [3-4] (psychology). The work was written in Sartakht, State of Assassins, and dedicated to Nāṣir al-Dīn `Abd al-Raḥīm, the Assassin governor of Kuhistan.

PH2. Fundamentals for Obtaining Knowledge (Asās al-iqtibās). Edition by Rizawi: al-Ṭūsī [16]. Research: Boltayev [1] (341-585). A work on logic.

PH3. Commentary on "Indications" (Sharḥ al-Ishārāt). Editions: Ibn Sīnā [46], al-Ṭūsī [6]. Research of the classification of sciences: Stephenson [1]. Commentary on the works (No 317, PH3-PH4) of Ibn Sīnā.

PH4. Resolution of Difficulties of "Indications" (Ḥall mushkilāt al-Ishārāt). Edition: al-Ṭūsī [8]. Commentary on the work (No 317, PH4) of Ibn Sīnā.

PH5. Theological Treatises: a) Properties of Nobles (Awṣāf al-ashrāf) - edition: al-Ṭūsī [13], b) Fundamental Principles of Islam (Qawā`id al-`aqā'id) - edition: al-Ṭūsī [9], c) Garden of presentation (Rawḍa al-taslīm) P - edition with English translation by Ivanov: al-Ṭūsī [17]. Edition of the collection of theological treatises by Rizawi: al-Ṭūsī [23].

PH6. Book of Sections on Principles [of Faith] (Kitāb al-fuṣūl fi'l-uṣūl). Edition with Persian translation by Danish-Pazhuh: al-Ṭūsī [21]. Edition of Section II (on freedom of will) with Russian translation and research: Shmidt [1].

H1. [Treatise on Finances]. Edition with English translation: Minowi and Minorsky [1]. Research: Farajov [1-5], Minovi and Minorsky [1]. Characteristic of economy and taxes in the Ilkhanid state and the draft of a tax reform which was later partially realized by Ghazan Khan.

L1. Measure of verses (Mi`yār al-ash`ār) P. Edition by Najm al-Dawla: al-Ṭūsī [12].

607. AL-SULTAN AL-AFDAL `ABBAS

al-Sulṭān al-Afḍal `Abbās ibn `Alī ibn Dāwūd (d. 1276), Rasulid sultan of Yemen (1363-1375); astronomer.

See: MAY (37), Lane-Poole (99-100).

A1. [Astronomical Compendium] - Sana'a (Akwa). Description of the manuscript: MAY (37).

608. BADR AL-DIN AL-FARISI

Badr al-Dīn Muḥammad ibn Abī Bakr al-Fārisī (d. 1279), Yemeni astronomer and astrologer, born in Aden (his father came from Fars), worked in the service of Rasulid Sultan al-Malik al-Muẓaffar Shams al-Dīn Yūsuf I (1249-1295), author of works on astronomy, medicine, music, and magic.

See: GAL (I 625), GAL^2 (I 866-867), IHS (II 1000), MAA (139, 218), MAMS (II 376-377), MAY (23-26), SSM (132), STMI (325).

A1. Limit of Knowledge on Mysteries of Sciences on Celestial Spheres (Nihāyat al-idrāk fi asrār `ulūm al-aflāk) - Beirut (199/3, 5888), Cairo (huruf 105, mīqāt 180, 191-192, 860, 983, 1196, Ṭal`at mīqāt 157/5, 248), Dublin (Beatty 4562), Istanbul (Millet, Ali Emiri 2722; SM Hamid. 830/2, Hüsrev 216; TK 7098), Jakarta (Sup. 625), Jerusalem (Yehuda 119), Princeton (Garr. 971). Treatise is dedicated to Sultan al-Malik al-Muẓaffar Yūsuf.

A2. On Principles of the Science of Stars (Fī uṣūl `ilm al-nujūm) - Berlin (5888).

A3. Star [Book] (Nujūmiyya) - Baku (B 4176/8).

A4. Ascension of Flaming Thought on Resolution of Difficulties of a Zīj (Ma`ārij al-fikar al-wahīj fi ḥall mushkilāt al-Zīj) - Alexandria (hisab 61; Mun. 3010D), Cairo (mīqāt 145, 817/1, Tal`at mīqāt 227/1, Taymūr riyāḍa 227/1), Istanbul (NO 2951/1), Jibla (al-Mutawakkil). Partial German translation: Steinschneider [10].

A5. Verified Zīj of al-Khazā'inī (al-Zīj al-mumtaḥan al-Khazā'inī) = Zīj of Muzaffar (al-Zīj al-Muẓaffarī) = Zīj of al-Fārisī (Zīj al-Fārisī) - Cambridge (3/27), Sana'a (Grand Mosque falak 492). Research: GAS (VI 67); Lee

[1]. The Zij is dedicated to Sultan al-Malik al-Muẓaffar Yūsuf and is based on observations of al-Shirwānī (No 890).

A6. Gift to the Wishing and Luxury of the Pupil in Simplification of [Theory of] the Sun and the Moon and Movement of Planets (Tuḥfat al-rāghib wa turfat al-ṭālib fī taysīr al-nayyirayn wa ḥarakāt al-kawākib) - Berlin (5731 - an anonymous fragment), Milan (X sup. 73).

A7. Treatise for al-Muzaffar on the Construction of [Instrument] Called " Plate of the Nodes" (al-Risāla al-Muẓaffariyya fi'l-`amal [al-āla] al-musammāt bi'l-ṣafīḥa al-jawzahariyya) - is mentioned in A1.

A8. Treatise on Shadows (al-Risāla al-ẓilliyya) - is mentioned in A1. Treatise on sundials.

609. JAMAL AL-DIN IBN MAHFUZ AL-BAGHDADI

Abu'l-Qāsim Jamāl al-Dīn ibn Maḥfūẓ al-Baghdādī (b. 1245), astronomer, from Baghdad. KZ (III 365 and 369); it is believed that he worked under the Baghdad Caliph al-Muqtadir (908-932), but the year of his birth mentioned in his Zij A1 and the year 1285, for which this Zīj was calculated, refute this opinion.

See: GAL (I 252), KZ (III 365, 369), MAA (197), MAMS (II 133), SSM (153).

A1. Zij of al-Baghdādī (Zīj al-Baghdādī) = Waqibian Zij (al-Zīj al-Waqibiyya) - Cairo (mīqāt 905/1), Paris (2486). Research: SIAT (124), Jensen [1] (Lunar theory).

A2. Perfect Treatise on the Construction of the Astrolabe (al-Risāla al-kāmila fī `amal al-asṭurlāb) = Book on the Science of Astrolabe (Kitāb fī `ilm al-asṭurlāb) - Alexandria (Mun.), Cairo (Taymūr riyāḍa 165/1), London (1002/24), Rome (Vat. Sbath 134/7). Treatise in 66 chapters.

A3. Commentary on "Concise Exposition of the Science of Astrolabe" (Sharḥ talkhīṣ al-asṭurlāb) - Baku (B 224/1). Probably a commentary on A2.

610. SADR AL-DIN AL-TUSI

Ṣadr al-Dīn Abu'l-Ḥasan `Alī ibn Naṣīr al-Dīn al-Ṭūsī (second half of 13th c.), the eldest son of Naṣīr al-Dīn al-Ṭūsī (No 606), mathematician and astronomer; after his father's death, he became director of the Maragha observatory.

See: IHS (II 1016), MAA (148, 219), MAMS (II 409); Seemann [1].

Sadr al-Dīn al-Ṭūsī is most probably author of the following work

M1. Book of Exposition of "Elements" of Euclid composed by Khwāja Naṣīr al-Dīn al-Ṭūsī (Kitāb taḥrīr Uṣūl Uqlīdis min ta`līf Khwāja Naṣīr al-Dīn al-Ṭūsī) - Florence (272, 313 - incomplete). Edition: al-Ṭūsī [1]. Photo-reproduction of the proof of Postulate V with its translation on Interlingua: Sjöstedt [1] (66-81). German translation of the foreword and introduction to Book I - Wiedemann [81] (228-231, 234-236). Latin translation by Pococke of the proof of Postulate V - Wallis [1] (669-673). French translations of this proof - Castillon [1] (175-183), Jaouiche [4] (233-245). Russian translations of this proof - Kagan [1] (I 119-122), Mamedbeyli [5] (22-36). Research: A. Ahmedov [1, 4], Dovlatova [1-3], Heiberg [2], Jaouiche [4] (109-111), Klamroth [1], Levi [1], Mamedbeyli [5] (22-40), [6] (149-179), [9], Matviyevskaya [4] (231-235), [16] (64-69), Murdoch [1], Rosenfeld [13], [25] (78-82), Rosenfeld, Kubesov, and Sobirov [1], Sabra [5, 8], Thaer [1].

However the Florence manuscripts ascribed to Naṣīr al-Dīn al-Ṭūsī (No 606) (1201-1274), Sabra [5] (15), [8] (18) indicated that, as it is written in these manuscripts, the original manuscript of this book was finished in 1298, and it could not have been written by (No 606). Therefore Murdoch [1] calls the author of this book "Pseudo-Ṭūsī".

A. Ahmedov [1, 4] proved that the treatise (No 655, M1) of al-Samarkandi written in the Maragha scientific school contains materials from the books of Naṣīr al-Dīn al-Ṭūsī (No 606, M1) and Sadr al-Din al-Ṭūsī (No 610, M1). Note also the great similarity of the work (No 610, M1) with the geometric part of the work (No 668, E1) of al-Ṭūsī's pupil Quṭb al-Dīn al-Shirāzī. Therefore we believe that the author of this work was the eldest son of (No 606) and in the original manuscript of this work "Ṣadr al-Dīn ibn Khwāja Naṣīr al-Dīn al-Ṭūsī" is written as the name of the author.

611. ASIL AL-DIN HASAN ZAWZANI

Aṣīl al-Dīn Ḥasan Zawzanī (second half of 13th c.), second son of Naṣīr al-Dīn al-Ṭūsī (No 606), astronomer and copyist of the Paris manuscript 779 of "Ilkhānid Zij" (No 606, A8).

See: MAA (149), MAMS (II 409); Seemann [1].

612 MUHAMMAD IBN SARTAQ AL-WARARQAYNI AL-MARAGHI

Muḥammad ibn Sartāq ibn Jūbān ibn Sharkīr ibn Muḥammad ibn Sartāq al-Wararqaynī al-Marāghī (13-14th c.). Iranian mathematician, from Wararqan, Kuhistan, of Mongol or Turkic origin; pupil of Ḥasan Zawzanī (No 611) in Maragha, served as professor at the madrasa in Niksar, Asia Minor (Turkey).
See: Djebbar [6].
M1. Mathematical Completion (Ikmāl al-riyāḍī) = Completion for Aṣīl al-Dīn (Ikmāl al-Aṣīlī) Cairo (Univ. 23029) - under the first title, Istanbul (AM 64) - under the second title. Revision of the work K. al-Istikmal by al-Mu'taman (No 391, M1).

613. AL-HASAN AL-SİVASI

Ḥusām al-Dīn al-Ḥasan ibn Muḥammad al-Sīwāsī (13th c.), astronomer, mentioned in "Exposition of Almagest" of al-Ṭūsī (No 606, A1) as the initiator of this work.
See: GAS (VI 93), KZ (V 387), MAMS (III 368).
A1. [Commentary on "Exposition of Almagest" of al-Ṭūsī] - Istanbul (Ragıp 913-914).

614. MUHAMMAD AL-KAWASHI

Muḥammad ibn Abī Bakr al-Kawāshī (13th c.), Yemeni astronomer.
See: MAY (27).
A1. Simplification of the Research of the Movement of Planets (Taysīr al-maṭālib fī tasyīr al-kawākib) - Alexandria (Mun. 5577/3), London (9116), Zabid (al-Ahdal).

615. MUHAMMAD IBN MUFADDAL AL-ABHARI

Abū `Abdallāh Muḥammad ibn Mufaḍḍal al-Abharī (d. 1272), son of Athīr al-Din al-Abharī (No 595); astronomer.
See: GAL (I 625), MAA (153), MAA^2 (176), MAMS (II 409); Casiri (I 397).
A1. Outstanding Instruments in the Ascension of Treatises (Lawāmi` al-waṣā'il fī maṭāli` al-rasāil) - Escorial (I 960), Gotha (1414). Description of the Gotha manuscript: Ruska and Hartner [1] (184-185). Description of the Escorial manuscript: Derenbourg [7] (109-110).

616. NAJM AL-DIN AL-KATIBI AL-QAZWINI

Najm al-Dīn `Alī ibn `Umar al-Kātibī al-Qazwīnī (d. 1277), born in Qazwin, worked in Maragha at the observatory of al-Ṭūsī (No 606), author of many works on philosophy and logic.
See: HD (549), HD^2 (358), GAL (612-614), GAL^2 (I 845-848), IHS (II 868), KZ (II 511, III 101, 103, 561, 563, IV 283, V 422, VI 112), MAA (153), MAMS (II 409-410), STMI (473, 496-497); Brockelmann [17a] (EI), Browne [3] (II 482-483), al-Kutubī [1] (II 83), Muhaqqiq [3] (EI^2).
E1. Wisdom of Source (Ḥikma al-`ayn) - Bakhchesaray (3658), Berlin (5080), Cairo (Taymur 97), Dushanbe (Ferd. 324), Escorial (II 668/2), Hyderabad (Salar falsafa 35-36), Istanbul (SM Kılıç 657, 661), London (428, 1200/8), Patna (2379), Kazan (3237), Rome (Vat. Sbath 138), St. Petersburg (B 3050 - physics), Tashkent (2532/6, 2947/12, 2971/18, 4040/10, 4070/9, 12, 4130/7, 4145/12, 4697/12, 5169/9, 5601/22, 5818/5, 5901/1, 6284/7, 6310/4, 6371/6, 6460/1, 6547/21, 6614/10, 6738/5, 7004/6, 8796/6, SADUM 330, 672, 1500, 1595, 1661, 1674, 1750/7), Tehran (Muza 4338), Ufa (3705).
Research: Matviyevskaya and Ibadov [1], Matviyevskaya and Tllashev [1]. "Wisdom of Source" is the second part of the "Book of Source of Foundations on Logic and Philosophy" (Kitāb `ayn al-qawā`id fī'l-manṭiq wa'l-ḥikma), the first part is devoted to logic and the second - to philosophy, natural sciences, and mathematics.
E2. Collection of Subtleties on Discovery of Truths (Jāmi` al-daqāiq fī kashf al-ḥaqāiq) - Cairo (VII 647), Paris (2370). Exposition of logic, physics, and problems of philosophy.
A1. [Revision of "Almagest"] - Istanbul (SM AS 2583).
PH1. Treatise on Foundations of Logic (al-Risāla al-shamsiyya fī'l-qawā`id al-manṭiqiyya). Edition: al-Kātibī al-Qazwīnī [1]. English translation of appendix to his "Dictionary of Technical Terms" by Sprenger. (Sprenger [1]).

617. `ABD AL-RAHMAN AL-JAWBARI

Zayn al-Dīn `Abd al-Raḥmān (`Abd al-Raḥīm) ibn `Umar al-Dīmashqī al-Jawbarī (13-th c.), mechanician, alchemist, and mystic; worked in Konya, Harran, and Diyarbakır (all in Turkey).

See: GAL (I 655), GAL² (I 910), KZ (IV 102), MAMS (II 410), Wiedemann [40, 43, 97].

Me1. Book of Selections on Opening of Mysteries and Exposure of Frauds (Kitāb al-mukhtār fī kashf al-asrār wa hatk al-astār) = Book of the Science of Ingenious Tricks (Kitāb fī `ilm al-ḥiyal) - Berlin (5563), Dresden (413), Gotha (1374-1376), London (1002/15, 1373/1), Paris (4640), Vienna (1434). Edition: al-Jawbarī [2]. Research: de Goeje [1], Steinschneider [3], Wiedemann [22] - balances, [40] - weapon, alchemy, parfumery, [43] - charlatans, [123] - colours of animals and people. Treatise containing chapters on mechanics, alchemy, and other kinds of practical activity, dedicated to Artukid ruler of Diyarbakır, Mawdud Rukn al-Dīn (1222-1232).

A1. Straight Path (al-Sirāṭ al-mustaqīm) - is mentioned in KZ. Treatise on astronomy and astrology.

618. `ALI AL-QUSTANTINI AL-GHARNATI

Abu'l-Ḥasan `Alī ibn `Alī al-Qusṭanṭīnī al-Gharnāṭī (13th c.), born in Constantine (in Andalusia, Spain or Algeria), worked in Granada; astronomer and geographer.

See: GAL² (II 364-365), IHS (III 1523-1524), MAA (153), MAA³ (172), MAMS (II 411); Casiri [1] (I 344).

A1. [Astronomical Poem] - Escorial (II 909/2). Description of the manuscript: Derenbourg [7] (8-9). Research: Kennedy and King [2]

619. JAMAL AL-DIN AL-ZAYDI AL-BUKHARI

Jamāl al-Dīn Muḥammad ibn Ṭāhir ibn Muḥammad al-Zaydī al-Bukhārī (13th c.), from Bukhara; worked in the Maragha observatory of al-Ṭūsī (No 606), founder of astronomical observatories at the courts of Mongol Khans Mangu (1251-1260) in Karakorum and Khubilay (1260-1294) in Khanbalyq (now Beijing). In China he was known as "Cha-ma-lu-ting".

See: MAMS (II 411); Hartner [5], Rashīd al-Dīn [2] (48).

620. FAKHR AL-DIN AL-HILATI

Fakhr al-Dīn Abu'l-Faḍl `Abd al-`Azīz ibn `Abd al-Jabbār ibn `Umār al-Ḥilāṭī (1197-1282), from Hilat (Ahlat in Turkey), physician, philosopher, and mathematician; worked in the Maragha observatory, was one of closest assistants of Naṣīr al-Dīn al-Ṭūsī (No 606).

See: Buniatov [2] (9-10).

M1. Light of Indication on Algebra and Almucabala (Nūr al-dalāla fi'l-jabr wa'l-muqābala) - Tehran (Univ. 4409/1). Research: Rashed [19] (311-312).

In the treatise indefinite equations are considered, in particular the problem of finding all rational solutions of the equation $x^2+y^2=N$ with given solutions (a, b) by the rule $x=[2uv+b(u^2-v^2)]/[u^2+v^2]$, $y=[a(u^2-v^2)-2buv]/[u^2+v^2]$ equivalent to multiplication of complex number (a+bi) by complex number $[2uv+i(u^2-v^2)]/(u^2+v^2)$ of unit modulus.

621. ABU NASR GHARS AL-NA`MA

Abu Naṣr Ghars al-Na`ma (13th c.), son of physician Mas`ud ibn al-Qass al-Baghdādī, lived in Baghdad during the Mongol invasion (1256), geometer.

See: HD² (342), MAA (153-154), MAMS (II 411).

622. `ALA' al-DIN AL-YASHKARI

`Alā al-Dīn Abu'l-Ḥasan `Alī ibn Maḥmūd ibn al-Ḥasan al-Yashkarī (1199-1281), born in Basra, came from Baghdad, died in Damascus; poet, astronomer, and astrologer.

See: MAA (154), MAMS (II 411-412); al-Kutubī (II 106).

623. MUTARRIF AL-ISHBILI

Muṭarrif al-Ishbīlī (13th c.), from Seville, astronomer, and astrologer.
See: MAA (154), MAMS (II 412); al-Maqqarī [1] (II 138).

624. ZAKARIYA AL-QAZWINI

Abū Yaḥyā (Abū Muḥammad, Abū `Abdallāh) Zakariyyā ibn Muḥammad ibn Maḥmūd al-Qazwīnī (1203-1283), from Qazwin, Iran; imam, jurist, geographer, astronomer, and physician; pupil of al-Abhari (No 595); worked in Damascus, Wasit, and Hilla. He served as judge in the last two towns.

See: AGL (359-366), GAL (I 633-634), GAL^2 (I 882-883), HMA (II 135-137), IHS (II 868-870), KZ (I 154-155, IV 186-190), MAA^2 (182-183), MAMS (II 412-413, III 368), PL (II 124-128), SSM (151); Farmer [4] (48), Levicki [2] (EI^2), Maqbul Ahmad [8] (DSB), Ruska [1-3], Streck [2] (EI), [3] (IA).

E1. Book of Marvels of Creatures and Rarities of the World (Kitāb `ajāib al-makhlūqāt wa gharāib wa al-mawjūdāt) - Berlin (6161-6162), Cairo (mīqāt 734 - chapter on fixed stars), Florence (Lor. 107), Gotha (1503-1508), Istanbul (SM AS 2935-2939), Kabul (King 2506), Leiden (10, 512, 5632), Makhachqala (12), Munich (463-266), Oxford (I 460, 890, II 267), Paris (2173-2180, 2182-2183, 2419/3, 2918/11), Philadelphia (41), Vienna (1435-1437). Persian translations: Berlin (345-346), Cairo (mīqāt 734, Tal`at 21, 26), Calcutta (Curz. 88), Cambridge (1705), Copenhagen (19), Detroit (8225), Edinburgh (362), Hyderabad (54, 72), Kabul (King 2506), London (373, 909, 1371, 1621, Sup. 5603, 7315, 7706, 7968, 8157, 11220, 16738-16740; Ind. 712-713, 754), Oxford (397-398), Paris (141-142, 807-812, 2051, 2375, Patna ((634), Princeton (Garr. 65), St. Petersburg (B 1008/1, C 596-597; Nat. 263, Khan. 306), Tehran (Gulistan 12309; Muza 1977; Sipahsalar 2801, 6940; Univ. 1425, 5253), Vienna (1438-1439). Turkish translations: Berlin (177), Vienna (1440); also OCLT pp. 3; 5-7; 13-14; 32-33; 38-39; 48; 58-59; 116; 117; 605; 606.
Editions: al-Qazwini [1-3]. English translation of Part II: Badiee [1]. German translations of Part I: by Ethé - al-Qazwini [4], Ruska [1] (208-345) (partial). Russian translation of the most important parts of Book 2 of Part I: Demidchik [2] (53-87). Russian translation of the most important parts of Part II: Demidchik [4] (88-123). Research: Demidchik [1-5], Ruska [1-3], Wiedemann [22, 68-69, 107, 139, 150, 154].
Part I: astronomy, chronology, physics, meteorology, mineralogy, botany, and zoology. Part II: geography - description of countries, people, and cities.

625. SHAMS AL-DIN IBN KHALLIKAN

Shams al-Dīn Abū'l-`Abbās Aḥmad ibn Muḥammad ibn Ibrāhīm ibn Abī Bakr ibn Khallikān al-Barmakī al-Irbīlī al-Shāfi`ī (1211-1282), born in Irbil, Iraq; came from the family of Barmakids, studied in Mosul and Aleppo, was supreme judge of Syria in Damascus, taught in madrasas of Cairo and Damascus.

See: GAL (I 398-400), GAL^2 (I 561-562), IHS (II 1120-1121), KZ (I 190, II 5, 94, 100, 102, 130, 631, VI 147, 452, 547, 628), MAMS (II 413), SSM (56); Brockelmann [12] (EI), [19] (IA), Browne [3] (II 475), Farmer [4] (47-48), Fück [4] (EI^2).

HS1. Book on Deaths of Illustrious Men and Information on Contemporaries (Kitāb wafayāt al-a`yān wa anbā abnā al-zamān) - Berlin (Marq. 2080), Cairo (Zaki 782/12 a fragment), Calcutta (Madrasa 5, Sup. 607-612), Gotha (1725/31), Hyderabad (III 995), Istanbul (BU Veliyuddin 2454; SM AS 2922/5, 3530/6, Aşir I 727/7, Esat 2194/5, Hamid. 1000, Selim. 758, Vehbi 1051/4, 1282/4, Yeni Cami 254), Madras (43), Manchester (294-299), Mashhad (XIV 32/89), Mosul (53/95, 235/139, 140), Patna (2387-2388), Peshawar (1427), Princeton (678-680), Tübingen (53).
Edition by Wüstenfeld: Ibn Khallikan [1], edition with English translation by de Slane: Ibn Khallikan [2]. Other editions: Ibn Khallikan [3-5].

626. SALIH AL-RUNDI

Abū'l-Baqā (Abū'l-Tayyīb) Ṣāliḥ` ibn `Alī ibn Sharīf ibn Yazīd ibn Muḥammad al-Rundī (1204-1285); knowledgeable in inheritance.
See: GAL^2 (860), MAA^3 (178), MAMS (II 413-414); al-Maqqarī [1] (I 935, II 780).
M1. Poem on Inheritance (Urjūza fī'l-farāiḍ) - Escorial (II 954/13).

627. MANSUR AL-YAMANI

Taqī al-Dīn Manṣūr ibn Fallāḥ al-Yamanī (13th c.) from Yemen; linguist and astronomer.
See: KZ (I 244, V 24, 654), MAMS (II 414).
A1. Sufficient book on Stars (al-Mughnī fi'l-nujūm) - is mentioned in KZ (V 654). Work in 4 volumes written in 1278.

628. AMIN AL-DAWLA IBN AL-QUFF AL-KARAKI

Abū'l-Faraj Amīn al-Dawla ibn Ya`qūb ibn Isḥāq al-Quff al-Karakī (1233-1286), Christian, born in Kark, pupil of Ibn Abī Uṣaybi`a (No 601); physician; geometer, also knowledgeable in philosophy.
See: MAA (154), MAMS (II 414), UA (II 273); Sam. Hamarneh [9] (ENWC), [10]
M1. [Commentary on Euclid] - is mentioned in UA.

629. MUAYYAD AL-DIN AL-`URDI

Mu'ayyad al-Dīn ibn Barmak al-`Urḍī al-Dimashqī (d. 1266), born in Damascus; astronomer, architect, and engineer, he constructed an astronomical instrument in Damascus for al-Manṣūr Ibrāhīm, ruler of Hims, (1239-1245) and taught geometry to Ibn al-Quff (No 628). After 1259 he worked in the Maragha observatory of al-Ṭūsī (No 606); he constructed instruments for this observatory and built a mosque and a palace in Maragha.
See: GAL² (I 869-870), GAS (VI 292), IHS (II 1013-1014), KZ (III 561-562, 567), MAA (147, 154), MAMS (II 414-415, III 368), SSM (97); Drechsler [1], Rosenfeld [63] (ENWC), Sayılı [18] (197-201).
On al-Urdi's celestial globe: Drechsler [1].
A1. Treatise on [Astronomical] Observations and Theoretical and Practical Knowledge on Observations and the Methods Leading to the Understanding of Regularities of the Movement of Planets. (Risāla fī kayfiyyat al-arṣād wa mā yuḥtāju ilā `ilmihī wa `amalihī min al-ṭuruq al-mu'addiya ilā ma`rifat `awdāt al-kawākib) - Istanbul (NO 2971/6; SM AS 2673/1; TK 3329/3), Paris (2544/10, 1592), Tehran (4345/2). French translation (incomplete): Jourdain [1]. German translation: Seemann [1] (23-106). Russian exposition: Mamedbeyli [6] (200-208).
Description of 11 instruments in the Maragha observatory: mural quadrant, armillary sphere, solstial armilla, equinoctial armilla, Hypparchus' diopter (alhidade), instrument with two quadrants, instrument with two limbs, instrument to determine sines and azimuths, instrument to determine sines and invers sines, the "perfect instrument", a parallactic ruler.
A2. Book on Astronomy (Kitāb al-hay'a) - Konya (Yusuf Ağa 140). Edition by Saliba: al-`Urḍī [7]. English translation: Saliba [6]. Research: Ansari [4], Saliba [6-9, 14-16]. Treatise contains non-Ptolemaic model of the movement of planets further developed by al-Shirāzī (No 668). Treatise was written before the foundation of the Maragha observatory.
A3. Book of Astronomy (Kitāb al-hay'a) - Konya (Yusuf Ağa 6829), Oxford (Marsh 621). Facsimile reproduction of the chapter on the height of the atmosphere - Saliba [16] (447-455). Research: Saliba [16] (the height of the atmosphere), Sayılı [18] (435 - general research).
A4. Introduction on Explanation of the Demonstration of the Fourth Proposition of Ninth [Book] of "Almagest" (Muqaddima fī taṣḥīḥ burhān al-shakl al-rābi` min tāsi`at al-Majisṭī) - Ankara (Saib 5092/7).

630. SHARAF AL-DIN AL-SAMARKANDI

Sharaf al-Dīn al-Ḥusayn ibn al-Ḥasan al-Samarkandī (13th c.), from Samarkand, mathematician.
See: GAL² (I 860), MAMS (II 415), PL (II 5-6).
M1. Treatise on the Method of [Solving] Numerical Problems (Risāla fī ṭarīq al-masā'il al-`adadiyya) P - Istanbul (TK 3455/12), Tehran (Univ. 1790/3). Description of the Istanbul manuscript: SHIM (516-517).

631. AHMAD AL-QARAFI

Shihāb al-Dīn Aḥmad ibn Idrīs ibn `Alī ibn `Abdallāh ibn Yallīn al-Qarafī al-Sanhājī al-Bahnasī (d. 1285), from Berbers, born in Bahnas, lived in Cairo (Qarafa is a cemetery in Cairo); theologian and jurist.
See: GAL (I 481-482), GAL² (I 665-666), IHS (III 708-709), KZ (I 158, 176, 270, 469, II 451, III 330, IV 576, V 424), MAMS (II 415).

Ph1. Book of Detailed Consideration of what is Perceived by Sight (Kitāb al-istibṣār fī mā tudrikuhu al-abṣār) - Cairo (VI 88), Escorial (II 707/9). German translations of answers on optics: Wiedemann [142], on Milky Way: Wiedemann [86]. Research of answer on the rainbow: Sayılı [1], Wiedemann [141, 152].

Answers on 87 questions of "King of Franks" in Sicily (Frederick II, 1194-1250) to "Sultan Kāmil" (Ayyubid sultan al-Kāmil Naṣīr al-Dīn, 1218-1238).

632. IBRAHIM AL-ASBAHI

Ibrāhīm ibn ʿAlī ibn Muḥammad ibn Manṣūr al-Aṣbaḥī al-Yamanī (13th c.), Yemeni astronomer.

See: MAMS (III 19), MAY (22-23, 58), SSM (131).

A1. Sapphires of Timekeeping (al-Yawāqīt fi'l-mawāqīt) - Baghdad (2962), Cairo (mīqāt 948/1), Sanaʿa (Grand Mosque falak 34).

633. ABU 'L-FARAJ IBN AL-ʿIBRI

Jamāl al-Dīn Abū'l-Faraj Yuḥannā Ghrīghūriyūs ibn Tāj al-Dīn Tūmā al-Malaṭī (1226-1286), was known by the Arabic name "Ibn al-ʿIbrī" and the Syriac name "Bar Ebhrāyā" (son of a Jew); Syrian historian, grammarian, philosopher, theologian, physician, astronomer, man of letters; born in Malatya (ancient Melitene, now in Southern Turkey), He was the son of Jewish physician Aaron who had been baptized. Abu'l-Faraj lived in Antiochia (Antakya, Turkey), then in Syrian Tripoli (Tripolis) where he received instruction in logic and medicine. In 1246 he was appointed as Jacobite bishop of Gubos near Malatya and assumed the name Ghrighuriyus (Gregorius); in 1253 he became the bishop of Aleppo; in 1254 he became mafrian (catholicos) of all Eastern Jacobites. He resided in Baghdad between 1264 and 1277, later in Mosul, Maragha, and Tabriz. In Maragha he worked as astronomer in the observatory of al-Ṭūsī (No 606). He wrote in Arabic and Syriac. He was to the Syrian world what Vincent de Beauvais or Albert the Great was to the Latin world. In Europe he was known as "Barhebraeus", the Latinized form of his Syriac name.

See: AGL (373-375), GAL (I 427-428), GAL² (I 591), HMA (II 147-151), IHS (II 975-979), KZ (V 387, 389, 443), MAA (154-155), MAMS (II 415-417); Ashtor [1], Assfalg [1] (LM), Baumstark [1] (312-320), Belov and Vilsker [1], Brockelmann [6] (EI), [20] (IA), Browne [3] (II 468-469), Budge [1], Matveyev [1], Matveyev and Matveyev [1], Milli [2], Segal [1] (EI²), Seligsohn and Gottheil [1] (JE), Ueberweg [1] (294-295), Varda [1], Wright [1] (265-281).

E1. Essence of Wisdom (Ḥewath ḥekhmethā) Sy - exposition of principal works of Aristotle, including "Physics". Research: Baumstark [1] (316), Wright [1] (269-270).

M1. [Syriac Exposition of Euclid's "Elements"] Sy. Research of extant fragments: Furlani [1].

A1. Ascent of the Mind (Sullāqā Hawnānāyā) Sy. Partial edition by Gottheil: Abū'l-Faraj [5a], complete edition by Nau: Abū'l-Faraj [12]. The summary of "Almagest", probably the edition of his astronomical lectures given in Maragha in 1272-1279.

A2. [Arabic Commentary on "Almagest"] - is mentioned in KZ. Wright [1] (271) mentions his Zīj which can be identical with a part of A1.

A3. Book of Zīj for Beginners (Kēthābā dē-zīg dē-sharwāyē) Sy - is mentioned by Budge.

PH1. Concise [Book] on the Science on Human Soul (Mukhtaṣar fī ʿilm al-nafs al-insāniyya). Edition by Sbath: Abū'l-Faraj [14].

PH2. Lamp of the Sanctuary (Mẹnārath Qudshẹ) Sy - exposition of 12 "bases of the church": 1) general knowledge, 2) universe, 3) theology, 4) incarnation, 5) angelology, 6) priesthood, 7) evil spirits, 8) soul, 9) free will, freedom, and fate, 10) resurrection, 11) end of the world, last judgement, 12) paradise. Edition of (1-2) with French translation by Bakou: Abū'l-Faraj [15]. Edition of (3) with French translation by Graffin: Abū'l-Faraj [21]. Edition of (8) with French translation by Bakoụ: Abū'l-Faraj [19].

PH3. Book of Ethics (Kēthābā d'īthiqon) Sy - edition by Bedjan: Abū'l-Faraj [8], partial English translation by Wensinck: Abu 'l-Faraj [13].

PH4. Book of the Dove (Kēthābā dē-yawnā) Sy - edition: Abū'l-Faraj [11], English translation by Wensinck: Abū'l-Faraj [13].

PH5. Book of Directions (Kēthābā dē-huddāyē) Sy, named also "Law of Laws" (Nomocanon) - Edition by Bedjan: Abu 'l-Faraj [9].

PH6. Book of the Pupils of the Eyes (Kēthābā dẹ-Bhābhāthā) Sy, treatise on logic and dialectics. Research: Baumstark [1] (216-217), Wright [1] (269).

PH7. Storehouse of Mysteries (Awṣar Razę) Sy - interpretation of the Holy Scripture. Research: Baumstark [1] (314), Göttsberger [1], Wright [1] (274).

ME1. Selected from al-Ghafiqi on Simple Drugs (Muntakhab al-Ghāfiqī fi'l-adwiya al-mufrada). Edition with English translation by Meyerhof and Sobhy bey: Abu'l-Faraj [16].

H1. Concise Book on States (Kitāb mukhtaṣar al-duwal) - Istanbul (SM Esat 2404), Leiden (185, 533). Edition: Abu'l-Faraj [6]. Edition with Latin translation by Pocock: Abu'l-Faraj [1]. German translation by Bauer: Abu'l-Faraj [2]. Turkish translation by Yaltkaya: Abu'l-Faraj [17].

H2. Chronography (Makhtębhānuth zabhnę) Sy - historical work, consisting of two parts: 1) civil history, "Syriac Chronics" (Chronicon syriacum), 2) history of the church (Chronicon ecclesiasticum). Edition of Part I with Latin translation by Bruns: Abu'l-Faraj [3], edition of this part by Bedjan: Abu'l-Faraj [7], edition of this part with English translation by Budge: Abu'l-Faraj [16]. Edition of Part II with French translation by Abbeloos and Lamy: Abu'l-Faraj [4]. This work contains a map of the climates.

L1. Book of Rays (Kęthābā dę-ṣemhę) Sy - Syriac Grammar. Edition by Martin: Abu'l-Faraj [5].

L2. Book of Grammar (Kęthābā dę-ghrammatikī) Sy. Edition by Martin: Abu'l-Faraj [5].

L3. Book of Laughable Stories (Kęthābhā dę-thunnāyę męghaḥḥekhānę) Sy. Edition with English translation by Budge: Abu'l-Faraj [10]. Russian translations: by Belov and Vilsker - Abu'l-Faraj [20], by Matveyev - Abu'l-Faraj [23]. Ukrainian translation by Varda: Abu'l-Faraj [22]. Research: R. Guseynov [1], Matveyev [1], Varda [1].

634. BUSTAN IBN MUHAMMAD

Bustān ibn Muḥammad (d. 1288), philosopher.

See: KZ (III 385), MAMS (II 417).

Ph1. Treatise on the Indivisible Particle (Risāla fi'l-juz' alladhī lā yatajazza') - is mentioned in KZ. Research: Bocoy [2].

635. MUHYI AL-DIN AL-MAGHRIBI

Muḥyī al-Dīn Yaḥya ibn Muḥammad ibn Abī'l-Shukr al-Maghribī (d. ca 1290), born in Maghrib, worked in Aleppo at the court of Ayyubid Sultan al-Nāṣir II (1237-1260). After Syria was conquered by the Mongols, he went to the Maragha observatory of al-Ṭūsī (No 606) in 1260.

See: GAL (I 626), GAL (I 868-869), GAS (V 114), HD (535, 548), HD[2] (350, 358), IHS (II 1015-1017), KZ (V 387-389), MAA (155-156), MAMS (II 418-419), SSM (151); Tekeli [12] (DSB), Tuqan [1] (424).

M1. Exposition of Euclid on Propositions of Geometry (Taḥrīr Uqlīdis fī ashkāl al-handasa) - Istanbul (SM AS 1719, Mihrishah 337), Oxford (II 280).

Edition of the chapter on parallel lines according all three manuscripts with English translation: Sabra [8] (15-17, 21-24). French translation of this chapter: Jaouiche [4] (250-251). Edition, English translation and research of the chapter on regular polyhedra: Hogendijk [26]. Research of the chapter on parallel lines: Jaouiche [4] (118-119), Pont [1] (187-188), Rosenfeld [27] (84-86), Rosenfeld and Yushkevich [10] (104-107), Sabra [7].

Revision of Euclid's "Elements". The coincidence of the proof of Euclid's Postulate V with the proof of Simplicius quoted by al-Hanafi in his letter (No 583, M1) to al-Ṭūsī and the absence of the names of al-Hanafi and al-Ṭūsī shows that this treatise was written before 1260.

M2. Revision of "Conic Sections" of Apollonius (Tahdhīb makhrūṭāt Abulūniyūs) = Commentary on the work "Conic Sections" of Apollonius (Sharḥ kitāb Abulūniyūs fi'l-makhrūṭāt) - Cairo (riyāḍa 696), Istanbul (BU Veliyuddin 1507), London (975/4, Sup. 14332/4), Manchester (358), Patna (2928/11).

M3. Improvement of the Work "Spherics" of Menelaus (Iṣlāḥ kitāb Mānālāus fi'l-ashkāl al-kuriyya) - Istanbul (NO 2971/2), London (Ind. 741), Mashhad (5232-5233), Tehran (Zanjani II 94-95).

M4. Revision of the Book "Spherics" of Theodosius (Tahdhīb maqālat Thawdhūsyūs fi'l-ukar) - Istanbul (NO 2971/1), Leiden (556/3), Mashhad (5426-5428, 6347), Paris (2408/4), Tehran (200/2). Research: Carra de Vaux [1].

M5. Treatise on the Reduction from the Figure of Secants and from Composed Ratios in the Short Way (Risāla fīmā tafarra'a 'an al-shakl al-qaṭṭā' min al-nisab al-mu'allafa 'alā sabīl al-ījāz) - Berlin (5957), Cairo (Taymūr riyāḍa 140/6 - a fragment), Istanbul (NO 2971/3), Kabul (Matb. 76 II/39). Description of the Berlin manuscript: Ahlwardt [1] (315).

M6. Book on Figure of Secants (Maqāla fī shakl al-qaṭṭā') - Mashhad (5360).

M7. Projection of the Astrolabe (Tastīḥ al-asṭurlāb) - Berlin (5806), Patna (2040), Tehran (186/2, 60/2).

M8. Treatise on Properties of Determining Sines Located in a Circle (Risāla fi kayfiyyat istikhrāj al-juyūb al-wāqi`a fi'l-dā'ira) - Istanbul (NO 2971/4).

A1. Crown of Zijes and Sufficient for the Needy (Tāj al-azyāj wa ghunyat al-muḥtāj) - Escorial (II 932), Mashhad (5330). Description of the Escorial manuscript: Derenbourg [7] (43-44). Research of the Mashhad manuscript: Kennedy [18]. Treatise in 100 chapters.

A2. Essence of "Almagest" (Khulāṣa al-Majisṭī) - Leiden (110).

A3. Book on Determining Equation of Day, Ortive Amplitude, and Angle of Turn of the Celestial Sphere by Geometric Method (Maqāla fi istikhrāj ta`dīl al-nahār wa sā`at al-mashriq wa al-dā'ir min'l-falak bi ṭarīq al-handasa) - Istanbul (SM Carullah 1501/3).

A4. Introduction Related to Movements of Planets (Muqaddima tata`allaqu bi ḥarakāt al-kawākib) - Ankara (Saib 5092/9, Istanbul (NO 2971/5).

A5. Support of Reckoner and Sufficient for the Pupil (`Umdat al-ḥāsib wa ghunya al-ṭālib) - Cairo (Fāḍil mīqāt 188/1). Description of the manuscript: SSM (151). Zīj for Maragha in 25 chapters plus introduction, written in 1262.

A6. Cycles of Lights Extended on Epochs and Regions (Adwār al-anwār mada al-duhūr wa'l-akwār) - Cairo (mīqāt 639/18 - incomplete), Dublin (Beatty 3665), Mashhad (332/103). Another Zīj for Maragha.

A7. (Kalām fi ayyat al-kursī) - Cairo (Khalil 7/3). Treatise on a detail of many astronomical instruments, by means of which they are suspended for observing celestial bodies.

A8. Useful Introduction and Sufficient Assertions on Nativities (al-Madkhal al-mufīd wa ghunyat al-mustafīd fi'l-ḥukm `alā'l-mawālīd) - Cairo (mīqāt 882).

A9. Treatise on Properties on Assertions on Transformation of World Years (Risāla fi kayfiyyat al-ḥukm `alā taḥāwīl sinī al-`ālam) = Book on Sufficient on Transformations of World Years (Kitāb fi kifāya `alā taḥāwīl sinī al-`ālam) - Cairo (falak 3774/5, lughat 5991/2, mīqāt 8/1, 883, Tal`at mīqāt 85/1, 106).

A10. Partial Predictions (al-Aḥkām al-juz'iyya) - Cairo (falak 3774/6).

A11. (Maqāla fi'l-ḥukm `alā'l-masā'il al-mutakhaṣṣaṣa bi aḥwāl al-sā'il) - Cairo (Ṭal`at mīqāt 85/2).

A12. (Ghunyat al-mustafīd) - Cairo (mīqāt 964).

636. `UMAR AL-FARIQI

Abū Ḥafṣ `Umar ibn Ismā`īl ibn Mas`ūd al-Fāriqī (1199-1290), worked and died in Damascus; astronomer, also knew medicine.

See: MAA (156), MAMS (II 419).

637. IBRAHIM AL-TILIMSANI

Abū Isḥaq Ibrāhīm ibn Abī Bakr ibn `Abdallāh ibn Mūsā al-Anṣārī al-Tilimsānī al-Burrī (1212-1291), born in Tlemcen, Algeria, worked in Granada, Malaga, and Ceuta, died in Ceuta; knew inheritance well.

See: GAL (I 482), GAL² (I 666), MAA³ (178), MAMS (II 419).

M1. Poem (Urjūza) = Poem of al-Tilimsānī on Inheritance (Manẓuma al-Tilimsāniyya fi'l-farāiḍ) - Algiers (149/9, 1317), Escorial (954/4), Rome (Vat. Borg. 160/3). Edition: al-Tilimsānī [2]. French translation by Faure-Biguet: al-Tilimsānī [1].

638. IBRAHIM AL-TABRIZI

Fakhr al-Dīn Abū Iṣḥāq Ibrāhīm ibn Muḥammad Gaḍanfar al-Tabrīzī (1232-1292), from Tabriz, historian, worked in Konya (Turkey).

HS1. [List of Works of al-Bīrūnī] P - Leiden (1067).

639. MUHAMMAD AL-`UTHMANI AL-FARIQI

Muḥammad ibn `Umar ibn `Alī ibn Aḥmad ibn Muḥammad al-`Uthmānī al-Fāriqī (13th c.), astronomer, worked in Aleppo.

See: GAS (VII 169), SSM (56).

A1. Abridgement of the "Period of Mercury" (Ikhtiṣār Dawr al-`Uṭāridī) - Cairo (falak 10965/1, mīqāt 54, Ṭal`at mīqāt 150), Istanbul (BU 4624; SM Hafid 194; Univ. 4524). Treatise was written in 1274.

640. SHIHAB AL-DIN IBN SA`ADA

Shihāb al-Dīn Muḥammad ibn Aḥmad ibn al-Khalīl ibn Sa`āda (1229-1294), born in Damascus, was judge in Damascus and Cairo; arithmetician, also knew inheritance well.

See: MAA (156), MAMS (II 419); al-Kutubī [1] (II 227).

641. SAFI AL-DIN AL-URMAWI AL-BAGHDADI

Ṣafī al-Dīn Abū'l-Mafākhir `Abd al-Mu'min ibn Yūsuf ibn Abī'l-Mafākhir al-Urmawī al-Baghdādī (d. 1294), born in Urmiya, Southern Azarbaijan; musician and librarian at the court of the last Baghdad Caliph al-Musta`ṣim (1242-1258); after the Mongol invasion, he worked at the court of Hulagu Khan (1256-1265).

See: GAL (I 653), GAL² (I 906-907), KZ (III 363, 413, V 625). MAMS (II 420, III 368); Farmer [8] (EI), [11] (48-50), [10] (IA), Neubauer [8] (EI²),

Mu1. Book of Cycles on the Science of Music (Kitāb al-adwār fī `ilm al-mūsīqā) - Berlin (5333), Istanbul (NO 3653/4, Ragip 919/3), Paris (2865), Tehran (96), Vienna (1209/17). Editions: al-Urmawī [1- 3]. French translation with commentary: d'Erlanger [1] (III 184-566).

Mu2. Treatise for Sharaf al-Dīn on Harmonic Ratios (al-Risāla al-Sharafiyya fī'l-nisab al-ta'līfiyya) = Book of Music (Kitāb al-mūsīqā) - Oxford (I 922), Paris (2479, 4867, 5070). Editions: al-Urmawī [2]. French translation with commentary: d'Erlanger [1] (III 3-182).

642. Al-AHDAB

Al-Aḥdab (13 th c.) Maghribi or Spanish mathematician.

See. GAS (V 62) , KZ (V 27) , Ibn Khaldūn [8] (III 123)

M1. Perfect [book] on Arithmetic (al-Kāmil fī'l-Ḥisāb) is mentioned in KZ and by Ibn Khaldūn. Research: Renaud [7]

M2. Ghubar's Book on Multiplication [in Figures] Ghubar (Kitāb ḍarb al-Ghubār) was commented by al-Kātib (No 644, M1).

643. NAJM AL-DIN AL-AHDAB

Najm al-Dīn Abū Ja`far al-Ḥasan al-Ḥasib al-Rammāḥ al-Aḥdab al-Qayrawānī (d. 1295), from Qayrawan, military technician.

See: IHS (Part II/ 1039-1040), MAMS (II 420).

MePh1. Cavalry's Book on Military Profession (Kitāb al-furūsiyya wa'l-munāsib al-harbiyya) - Paris (2825/1). Research: Reinaud and Favé [1]. Treatise on military techniques: of cavalry and infantry using spears and catapults; on burning mirrors and "artificial fire".

644. ABU'L-MAJD AL-KATIB

Abū'l-Majd ibn `Aṭiya ibn Abū'l-Majd al-Kātib (13th c.), mathematician.

See: GAL (I 622), GAS (VII 400), MAA (198), MAMS (III 23).

M1. Book on Multiplication and Division (Maqāla fī'l-ḍarb wa'l-qisma) - London (Suppl. 3473/21. Commentary on treatise (No 642 M2) of al-Aḥdab.

645. `ABD AL-`AZIZ AL-DIRINI

Ḍiyā' al-Dīn `Izz al-Dīn Abū Muḥammad `Abd al-`Azīz ibn Aḥmad ibn Sa`īd al-Dīrīnī al-Damīrī al-Dahrī (1215-1297), from Dirin, Egypt; theologian, philologist, and knowledgeable in calendars.

See: GAL (I 830-831), MAMS (II 420-421), SSM (57-58).

A1. Beginnings of Months (Fī'l-madākhil al-shuhūr) - Cairo (Fāḍil mīqāt 149/2), St. Petersburg (C 688). Astronomical poem.

A2. Book on Sapphires in the Science of Timekeeping (Kitāb al-yawāqīt fī `ilm al-mawāqīt) - Cairo (mīqāt 584, 651/5 - both are incomplete, the last is anonymous), Istanbul (SM Hamid. 1453), Mosul.

646. MUHAMMAD AL-RAQUTI

Abū Bakr Muḥammad ibn Aḥmad al-Raqūtī (d. at the end of 13th c.), from Murcia, Spain; mathematician, also knowledgeable in medicine and music; taught these sciences in Murcia; died in Granada.
See: MAA (156-157), MAMS (II 421); Casiri [1] (II 81).

647. SHAMS AL-DIN AL-ZARKASHI

Shams al-Dīn Muḥammad ibn Rabī` al-Zarkashī al-Muhandis (13th c.), geometer or architect (= muhandis).
See: GAL (I 622), MAMS (II 421).
M1. General Arithmetic (Kulliyāt al-ḥisāb) - Alexandria (mun. 2051/4). Description of the manuscript: Sayyid [1] (77-78).

648. JAMAL AL-DIN IBN WASIL

Jamāl al-Dīn Abū `Abdallāh Muḥammad ibn Sālim ibn Wāṣil (1207-1298), worked in Cairo, he was the Egyptian ambassador in Sicily; taught philosophy, mathematics, and astronomy in Hama, Syria.
See: KZ (I 243, 367, IV 199, VI 33, 317), MAA (157), MAMS (II 421); Abu'l-Fida [1] (V 144).

649. BAYLAQ AL-QIBJAQI

Baylaq ibn `Abdallāh al-Qibjāqī (13th c.), from Qibjaqs (Kipchaks), worked in Cairo at the courts of Mamluk Sultan al-Manṣūr Qalawūn (1279-1290) and Bahri (Qibjaq) dynasty of Mamluk sultans.
See: GAL² (I 904), IHS (II 1072-1073, III 714), SSM (56); Plessner [7] (DSB), Ullmann [2] (128).
A1. [Treatise on Solar Eclipse Computations] - Cairo (mīqāt 639/14). Appendix to the treatise (No 812, A1) of Ibn al-Mushrif.
A2. Tables of the Right Ascension from the Beginning of Aries for Each Minute [of Ecliptic Longitude] (Jadāwil maṭāli` al-falak al-mustaqīm min awwal al-Ḥamal maḥlūla daqīqa daqīqa) - Cairo (Fāḍil mīqāt 41). Treatise was written in Cairo in 1275.
Mi1. Book of Treasure for Merchants who seek Knowledge of Stones (Kitāb kanz al-tujjār fī ma`rifat al-aḥjār) - Paris (2779). Book on mineralogy containing the description of swimming magnetic compass and its application by sailors. The book was written in 1282 and dedicated to Sultan Qalaun.

650. AL-AS`AD IBN AL-`ASSAL

Al-As`ad ibn al-`Assāl (13th c.), Egyptian (Coptic) astronomer.
See: SSM (56-57); Atiya [1] (EI²), Graf (II 403-407).
A1. [Tables for Finding the Longitudes of the Sun and the Moon and Fasts in the Coptic Calendar) - Cairo (mīqāt 910/1). Photo-reproduction of two pages of the manuscript: SSM (240).
A2. [Poem on the Longitudes of the Sun and the Moon and Fasts in the Coptic Calendar] - Cairo (mīqāt 853).

651. MUHAMMAD AL-HALABI

Bahā' al-Dīn Muḥammad ibn Ibrāhīm ibn Muḥammad al-Ḥalabī (1230-1299), was known by the name "Ibn al-Naḥḥās" (son of a coppersmith), born in Aleppo, worked in Cairo; geometer, was also knowledgeable in philology and logic.
See: MAA (157), MAMS (II 421); al-Kutubī [1] (II 215).

652. MUHAMMAD AL-HIMADHI

Muḥammad ibn `Alī ibn al-Ḥusayn al-Ḥimādhī (13-14th c.), astronomer, worked in the Maragha observatory of al-Ṭūsī (No 606).
See: MAA (157), MAMS (II 421-422).

A1. Explanation of Aims of "Memoir" (Bayān maqāṣid al-Tadhkira) - London (397). Commentary on the work (No 606, A10) of al-Ṭūsī.

653. MUHAMMAD IBN AHMAD ABU'L-`UQUL

Muḥammad ibn Aḥmad known as "Abū'l-`Uqūl" (Abū'l-`Uqūl = father of minds, genius) (13-14th c.), Yemeni astronomer, worked under Rasulid Sultan al-Mu'ayyad Dāwūd ibn Yūsuf (1297-1321).

See: GAL^2 (I 864), MAMS (II 365), MAY (30-32).

A1. Zij Selected from amongst [Many] Zijes Leading to the best Method and Way (al-Zīj al-mukhtār min al-azyāj al-mufḍī bi'l-`āmil bihī ilā awḍaḥ ṭarīqa wa minhāj) - London (Sup. 768, 783 - a fragment).

A2. Mirror of the Time (Mir'āt al-zamān) - Berlin (5720 - a fragment). The extant fragment contains tables for timekeeping for Taiz.

654. AL-HUSAYN IBN BASO AL-ASLAMI

Abū `Alī al-Ḥusayn ibn Aḥmad ibn Yūsuf ibn Bāṣo al-Aslāmī (second half of 13th c.), was chief of the timekeeping service in Cordoba.

See: GAL (I 626), GAL^2 (I 869, II 709), MAA (157), MAA^3, MAMS (II 422), SSM (137); Calvo [1-3], Renaud [3].

A1. Treatise on Times (Risāla fi'l-awqāt) = Universal Tympanum for All Latitudes (al-Ṣafīḥa al-jāmi`a li jamī` al-`urūḍ) - Cairo (Taymūr riyāḍa 159/2), Escorial (956/7), Jerusalem (Khalid.), London (408/9, an extraction), Rabat (451), Tunis (Sadiq. 2843). Description of the Escorial manuscript: Derenbourg [7] (100). Research: Calvo [1, 3-4], Renaud [3], Samsó [5] (176-180). Treatise in 161 chapters on a universal astrolabe claimed as superior to the zarqāla and shakāziyya astrolabes.

655. SHAMS AL-DIN AL-SAMARKANDI

Shams al-Dīn Muḥammad ibn Ashraf al-Ḥusaynī al-Samarkandī al-Marāghī (second half of 13th c.), from Samarkand, author of many works on philosophy, theology, logic, mathematics, and astronomy.

See: GAL (I 615-617), GAL^2 (I 849-850), IHS (II 1020), KZ (I 207, 322, IV 98, 515, V 387-388, VI 77, 85), MA (123), MAA (157), MAA^2 (176), MAMS (II 422-423, III 368), PL (II 7, 60-61), SSM (153), STMI (424); Abdullayev and Hikmatullayev [1] (39-40), De Young [14] (ENWC), Dilgan [9] (DSB), Matviyevskaya and Tllashev [6] (32-33), Tuqan [1] (428).

M1. Propositions of Substantiation (Ashkāl al-ta'sīs) - Baku (A 1059/2, B 2450/1, 2, 3157/1), Cairo (falak 3957/6, riyāḍa 365, 824, 826, 1024, Halil maj. 7/7, Ṭal`at majlis 485/3, riyāḍa 16, 143 - anonymous, Zaki 127/2), Fas (Zawiya 9/12), Gotha (1414, 1496-1497), Hyderabad (riyāḍa 405; Said. riyāḍa 16), Istanbul (Ragıp 919/4; SM AS 2712/1, Esat 3787/3, Fatih 3885/2, 5330; Yeni Cami 1176/17), Lucknow (45453), London (388, 1332/3, Sup. 23570), Mahachqala (226/2), Mosul (Nu`man. 91/2; Hajiyat 51), Najaf (Ayatallah 139), Oxford (I 967/2), Princeton (Yehuda 373, 4350), Kazan (820, 1121, 4431), Rome (Vat. Sbath 820/1), St. Petersburg (B 821/3, 2563), Tashkent (3055, 3373/4), Tehran (Muza 4330/2; Sipahsalar 205). Persian translation by al-Walishtānī (No 832) - Istanbul (SM AS 1865/3).

Editions: al-Samarkandi [1] with commentary of al-Rūmī (No 808, M2) and Muḥammad al-Hādī (No 985, M1). Translations of chapter on parallel lines: Turkish - Dilgan [5] (113-118), French - Dilgan [7], Russian by Rosenfeld: Rosenfeld and Yushkevich [4] (599-602). Research: A. Ahmedov [1-3, 5, 7]. Exposition of planimetry as based on Books I-II of Euclid's "Elements" and works of al-Ṭūsī (No 606) and al-Abhari (No 595). The proof of Postulate V by al-Abharī is exposed. English translation and research: De Young [16].

M2. Book on Kinds of Clouds on Kinds of Reckoning (Kitāb anwā` al-saḥāb fi anwā` al-ḥisāb) - is quoted in the anonymous treatise Istanbul (SM Carullah 1457/3), see SHIM (521).

A1. Operation with the Calendar of Fixed Stars (A`māl-i taqwīm kawākib-i thābita) P - Leiden (1196/3). Star calendar for 1276/7.

A2. Memoir on Astronomy (al-Tadhkira fi'l-hay'a) - Berlin (Oct. 3586/1).

A3. Commentary on "Almagest" (Sharḥ al-Majisṭī) - is mentioned in KZ (V 387).

656. RASHID AL-DIN FADLALLAH

Abu'l-Khayr Rashīd al-Dīn Faḍlallāh ibn `Imād al-Dawla al-Hamadānī "Rashīd al-Dīn Ṭabīb" (1247-1318), from Hamadan, Persian physician and historian of Jewish origin, was unwilling guest of the State of Assassins in Alamut together with al-Ṭūsī (No 606) in 1256 when Alamut was captured by the Mongols; both were taken into the service of Hulagu Khan and his successors. Rashīd al-Dīn was physician and adviser of Abaqa Khan (1265-1281) and vizier of Ghazan-Khan (1295-1304) and Uljaytu (1304-1317). During the reign of Abū Sa`īd (1317-1335), because of the intrigues of his enemies, he was accused of poisoning Uljaytu and was executed in Tabriz.

See: GAL (II 200), GAL² (273), HMA (II 133-134), IHS (968-976), PL (I 71-78, III 242-243), PL² (301-322, 767-768); Barthold [7] (44-48), Ye. Bertel's [2a] (EI), Browne [4] (III 80-86).

H1. Collection of Chronicles (Jāmi` al-tawārīkh) P. Edition and French translation of Quatremère: Rashīd al-Dīn [1]. Partial Russian translation of Arends: Rashīd al-Dīn [2]. Complete English translation by Thackton, vols 1-3: Harvard Univ. 1998-1999. Partial Arabic translation by al Sayyad, Beirut 1983. History of Mongol's conquest of Iran containing information on the foundation of the Maragha observatory by al-Ṭūsī (No 606).

657. `IMAD AL-DIN IBN AL-KHAWWAM AL-BAGHDADI

`Imād al-Dīn `Abdallāh ibn Muḥammad al-Khawwām (or al-Khaddām) al-Baghdādī ibn `Irāqī (1245-1325), mathematician, pupil of al-Ṭūsī (No 606), worked in Baghdad.

See: GAL (I 215), GAL² (I 860, II 197, 215), GAS (V 115), KZ (IV 471), MAA (197-198), MAMS (424, III 368), SSM (153).

M1. Notable Uses of Arithmetic Rules (al-Fawā'id al-bahā'iyya fi'l-qawā`id al-ḥisābiyya) - Berlin (5976), Cairo (falak 3956), Istanbul (SM AS 2729, Selim 1276/2), London (5615/1; Ind. 771/2), Mashhad (145), Princeton (Yehuda 358, 4111, Houtsma 2106/3), St. Petersburg (B 2139), Tashkent (3893, 4893, 6175/3 - only Book III).

Description of the St. Petersburg manuscript and Russian translation of a chapter on geometry: A. Ahmedov [6] (where this treatise is ascribed to the copyist Bakr ibn Khalīl). Description of the Berlin manuscript: Ahlwardt [1] (334). Research: `Abdeljaouad and Hadfi [1], Fazlıoğlu [1], Hadfi [1]. Research of the Tashkent manuscript 4893: Matviyevskaya and Tllashev [6] (85-91), Tllashev [5].

Treatise in 5 books: 1) arithmetic, 2) deals, 3) geometry, 4) algebra, 5) 40 algebraic problems. Treatise is dedicated to Bah al-Dīn Muḥammad ibn Muḥammad al-Juwaynī, therefore the words "al-Fawā'id al-bahā'iyya" in the title of the treatise can be also translated as "Baha al-Dīn's Uses".

M2. Treatise on Arithmetic Rules (al-Risāla al-shamsiyya fi'l-qawā`id al-ḥisābiyya) - Paris (2470).

M3. Commentary on the Tenth Book of of Euclid's Work (Sharḥ al-maqāla al-`āshira min kitāb Uqlīdis) - Cairo (riyāḍa 300/1).

658. HAYDAR AL-SHIRAZI

Naṣīr al-Dīn Ḥaydar ibn Muḥammad al-Shīrāzī (13-14th c.), from Shiraz, astronomer.

See: MAMS (II 424-425), PL (II 63-64), STMI (338).

A1. Guide on Stars (Hidāyat al-nujūm) P - Hyderabad (riyāḍa 136), London (Sup. 23678), Paris (852/2). Research of Georgian translation by King of Georgia Vakhtang VI (1675-1737): Dondua [1]. Treatise was written in 1288.

A2. Instruction on the Astrolabe (Irshād-i asṭurlāb) = Fifty Chapters (Panjāh bāb) P - Berlin (334), Bombay (Firuz 31), Hyderabad (Osm. 1171; Salar hay'a 35), Istanbul (NO 2894), London (455/2, Sup. 7703), Mashhad (8), Najaf (Ḥusayn.), Paris (455/2), Tehran (149; Sipahsalar).

A3. Khan Zij (Zij-i Khānī) P - Rampur (1205).

A4. Zīj of Observation of Planets (Zīj-i raṣad-i siyār[āt]) - is mentioned in A1.

659. AHMAD AL-SUFI AL-MAQSI

Jamāl (Shihāb) al-Dīn Abu'l-`Abbās Aḥmad ibn `Umar ibn Ismā`īl al-Ṣūfī al-Maqsī or al-Maqdisī (13-14th c.), Egyptian astronomer.

See: GAL (I 626), GAL² (I 869), KZ (IV 51), MAA (158), MAMS (II 425), SSM (58).

A1. Healing of Diseases by Drawing Hour [Lines] on Sundials (Shifā' al-askām fī waḍ' al-sā'at 'alā'l-rukhām) - Cairo (mīqāt 103/1, 517, 597/4, 955 - all incomplete), Gotha (1454 - incomplete), Istanbul (NO 2943), Leiden (98/3), Oxford (I 1017, II 606), is quoted in KZ.

A2. Book on Turn (Kitāb al-dā'ir) = Extremely Useful Book on Determining Turn by [Solar] Altitude (Kitāb ghāyat al-intifā' fī ma'rifat al-dā'ir min qibal al-irtifā') - Cairo (mīqāt 444, 776/1), Gotha (1402). Tables of time from sunrise as function of Solar altitude and longitude for latitude 30° of Cairo.

A3. Book on Turn and Its Surplus (Kitāb al-dā'ir wa faḍlihī) - Cairo (falak 4044/1, mīqāt 777-778, both anonymous, Taymur riyad 191 - is ascribed to Ibn Yūnis (No 283). Timetables from sunrise and the hour angle for the latitude 30° of Cairo.

A4. Section on the Knowledge of the Position Arc of [the Prayer] 'Asr on Oblique [Sundial] from One to Ninety degrees for a Latitude of 30° (Faṣl fī ma'rifat waḍ' qaws al-'aṣr fī munḥarifāt min wāḥid ilā tis'īn li 'arḍ 30) - Cairo (mīqāt 600/3). Tables for the latitude 30° of Cairo.

660. FARID AL-DIN AL-TUSI

Farīd al-Dīn Abu'l-Ḥasan 'Alī ibn Ḥaydar ibn 'Alī al-Ṭūsī (d. 1300), mathematician, worked in the Maragha observatory of Naṣīr al-Dīn al-Ṭūsī (No 606).

See: MAMS (II 425).

M1. Commentary on "Concise Exposition" (Sharḥ al-Talkhīs) - is mentioned in KZ. Commentary on the work (No 696, M1) by Ibn al-Bannā.

661. ABU 'ALI AL-FARISI

Abū 'Alī al-Fārisī (13-14th c.), from Fars, astronomer, worked in Hama, Syria.

See: GAL² (I 175-176), SSM (59).

A1. Operations with the Astrolabe (Maqāṣid dhawī al-albāb fī'l-'amal bi'l-asṭurlāb) - Cairo (Kavala mīqāt 2/1). Photo-reproduction of the pages of the manuscript on the use of the astrolabe for surveying: SSM (278). Treatise was written in Hama ab. 1300.

662. KAMAL AL-DIN AL-HAKKAK

Kamāl al-Dīn al-Ḥasan ibn al-Ḥusayn al-Ḥakkāk al-Marwazī (b. 1216) from Merw, mathematician and astronomer.

See: MAMS (II 425), PL (II 7).

M1. Instructor for Reckoners (Murshid al-muḥāsibīn) P - Paris (2396).

A1. Explanation of the "Ilkhanid Zīj" (Tawḍīḥ-i zīj-i īlkhānī) P - London (455A). Commentary on Zīj (No 606, A8) of al-Ṭūsī.

663. 'ABDALLAH AL-SHARRAT

'Abdallāh ibn Muḥammad al-Sharrāṭ (d. 1304), from Malaga, lived and died in Granada; finance minister; arithmetician.

See: MAA (158), MAMS (II 425); Casiri [1] (II 102).

664. MUHAMMAD IBN ABI JARADA

Muḥammad ibn 'Umar ibn Aḥmad Hibatallāh ibn Abī Jarāda (13-14th c.), mathematician.

See: GAS (V 129, 163), MAA (158), MAMS (II 414, 426), SSM (154).

M1. Revision of the Book of Thābit ibn Qurra on Sections of the Cylinder and their Surface (Taḥrīr maqālat Thābit ibn Qurra fī quṭū' al-usṭuwāna wa basīṭihā) - Cairo (Fāḍil riyāḍa 41/6). Revision of the work (No 103, M18) of Ibn Qurra, written in 1292.

M2. Commentary on the Book of "Spherics" of Menelaus (Sharḥ kitāb al-ukar li Mānālāwus) -Manisa (1706/1).

Ph1. Revision of Euclid's "Optics" (Tajrīd Uqlīdis fī'l-manāẓir) - Cairo (riyāḍa 638).

665. `ABD AL-RAHIM AL-MIZZI

Zayn al-Dīn `Abd al-Raḥīm (or `Abd al-Raḥmān) al-Mizzī al-Ḥanafī (second half of 13th c.), probably grandfather of (No 715) Shams al-Din al-Mizzī.
See: KZ (III 366), MAMS (II 426).
A1. Treatise on Astrolabe (Risālat al-asṭurlāb) - Paris (2519/1). Treatise in 10 chapters.

666. SHARAF AL-DIN AL-MAS`UDI

Sharaf al-Dīn Muḥammad ibn Mas`ūd ibn Muḥammad al-Mas`ūdī (second half of 13th c.), mathematician, astronomer, and geographer.
See: KZ (III 384, V 223, VI 470), MAMS (II 426-427, III 368), PL (II 51-52, 123, 447), STMI (360-361).
M1. Arithmetic and Algebra and Almucabala (al-Ḥisāb wa'l-jabr wa'l-muqābala) - Tashkent (10364/1, 10582/3).
Research: Matviyevskaya and Tllashev [6] (92-96). Treatise in 12 chapters: 1) introduction, 2) addition, 3) substraction, 4) duplication, 5) mediation, 6) multiplication, 7) division, 8-10) arithmetic of fractions, 11) linear and quadratic equations, 12) problems.
M2. Treatise on Algebra and Almucabala (Risālat al-jabr wa'l-muqābala) - is mentioned in KZ. Probably this treatise coincides with the one mentioned in (No 802, M1) by al-Kāshī [6] (192) algebraic treatise of this author where not only 6 linear and quadratic equations but also 19 cubic equations are considered, that is, the same equations as in the treatise (No 420, M3) of Khayyām.
A1. Book on Knowledge of the World (Kitāb-i Jihān-i dānish) P - Berlin (328), Istanbul (SM AS 2602-2603), Leiden (1196), London (Sup. 110, 154), Manchester (Lind. 708), Oxford (1497), Paris (775-776), Rampur (1172), Rome (Vat. 1398), Tehran (Ma`arif 120). Author's Persian translation of A2. Edition: Sh. al-Mas`ūdī [1].
A2. Sufficient Work on Astronomy (Kifāya fī'l-hay'a) - is mentioned in KZ (V 223), author's Persian translation: A1.
Ph1. Treatise on the Knowledge of Elements and all Being in the Air (Risāla dar ma`rifat-i `anāṣir u kāināt al-jaww) P - Patiala (Kapurthala), Mashhad (Nihawandi).

667. NAJM AL-DIN IBN AL-RIF`A

Najm al-Dīn Abu'l-`Abbās Aḥmad ibn Muḥammad ibn `Alī ibn al-Rif`a al-Anṣārī (d. 1310), jurist.
See: GAL (II 165-166), GAL² (II 164), MAA (158), MAMS (II 427), SSM (59); Abu'l-Fida [1] (V 243).
Me1. Explanation and Exposition of Knowledge of Measures and Weights (al-īḍā ḥ wa'l-tabyān fī ma`rifat al-mikyāl wa'l-mīzān) - Cairo (`aqaid 3964/12, riyāḍa 4, Ṭal`at riyāḍa 145, Taymur riyad 312, 359).

668. QUTB AL-DIN AL-SHIRAZI

Quṭb al-Dīn Maḥmūd ibn Mas`ūd ibn Muṣliḥ al-Shīrāzī (1236-1311), born in Shiraz; studied medicine and law with his father Mas`ūd al-Qadharūnī; mathematics, astronomy and philosophy with al-Ṭūsī (No 606) in Maragha and worked in the observatory. Al-Shīrāzī was the best pupil of al-Ṭūsī who later saw him as a rival and expelled him from the observatory. Later al-Shīrāzī worked as a judge in Sivas and Malatya (Turkey) and in various cities in North-West Iran. He also carried out missions for Ilkhanid rulers. After carrying out a successful diplomatic mission for Ilkhanid Aḥmad Tekudar (1282-1284) in Egypt, al-Shīrāzī moved to Tabriz, the new capital of the Ilkhanid Empire. He worked at the courts of Ilkhanid Ghazan Khan (1295-1304) and Uljaytu (1304-1317). He founded a new astronomical observatory and scientific school in Tabriz that became the successor of the Maragha observatory and school.
See: AGL (115-116), GAL (II 274-275), GAL² (II 296-297), GAS (III 136, VII 401), IHS (II 1017-1020), KZ (I 169, 199, 302, 336, 425, II 229, 269, 371, III 102-103, 201, IV 311, 378, 498-499, V 185, 559, VI 16, 171, 396, 515), MAA (158-159), MAA² (176-177), MAMS (II 427-432, III 368), PL (II 64, 354-355), SSM (153), STMI (347-348, 415, 610); Abu'l-Fida (V 63, 243), Farmer [4] (51), Muzafarova [2], Nasr [9] (DSB), Rosenfeld [30], Saliba [16], Sharipova and Muzafarova [1], Shermatov [3], Tuqan [1] (425-427), Walbridge [1] (ENWC), Wiedemann [199] (EI), [206] (IA).
E1. Pearl of Crown for the Decoration of al-Dibaj (Durrat al-tāj li ghurrat al-Dibāj) - Akbarabad (III 2220), Aligarh (Azad Subh. 1-2, 20/12), Berlin (349), Calcutta (Sup. 874, Curz. 344, 483-484; Buhar 217-218), Dushanbe (Ferd. 1893/1), Florence (28), Hyderabad (riyāḍa 71, 342-344; Salar), Istanbul (Köprülü 867; SM

AS 2405), London (454/1, 435/1, Sup. 7694; Ind. 2219-2220), Mashhad (22), Oxford (Sup. 471), Paris (724), Patna (906), Kazan (48), St. Petersburg (B 964), Tashkent (816), Tehran (400, 600, 1828, 4720, 5395/2; Malik 43, 1359, 1489-1490, 1525; Sipahsalar 540-543; Univ. 2294, Hukuk 123), Vienna (24).
Description of the Vienna manuscript: Flügel [6] (35-37). Description of the Dushanbe manuscript: Yunusov [1] (47-48, 265 - Photo-reproduction of a page). Description of the Patna manuscript: `Abd al-Muqtadir [1] (139-142). Edition by Mishkat: al-Shirāzī [2]. Research: Matviyevskaya, Ibadov and Yusupova [1], Wiedemann [131, 135]. Work in 5 parts: 1) logic (7 books), 2) philosophy (2 books), 3) physics (2 books), 4) mathematical sciences (4 books - geometry, astronomy, arithmetic, music), 5) metaphysics; conclusion (4 books on religion and politics). It was dedicated to al-Dibaj, son of Filshah ibn Rustamshah (Western Gilan).

E2. Super-commentary on Commentary on "Wisdom of Source" (Ḥāshiya `alā Sharḥ Ḥikmat al-`ayn). Edition: on margins of the edition: al-Bukharī [2]. Super-commentary on commentary of al-Bukharī (No 694, E1) on the work of al-Katibi al-Qazwini (No 616, E1).

M1. [Arithmetic Part of E1]. Research: Aḥmad and Ansari [1] (figurate numbers), Borho [2], Dobrovol'skiy, Kahhorov and Khojiyev [1] (amicable numbers), Muzafarova [10-11], Sharipova and Muzafarova [1].

M2. [Geometric Part of E1] - separate manuscripts: Istanbul (SM Yeni Cami 796), Rampur (Nazir 245), Tehran (4816/3); Bayani, Mu`tamid 117/8; Univ. Ilah. 764/8). Research; Muzafarova [9-10], Rosenfeld [37] (321-324), Rosenfeld and Yushkevich [10] (107-110) (theory of parallel lines), Sharipova and Muzafarova [1].

M3. Translation of the Book of Euclid (Tarjama-yi kitāb-i Uqlīdis) - Rampur (1157).

M4. On Geometry (Fī'l-handasa) - Tehran (Mu`tamid 117/12).

M5. [Commentaries on Treatise on the Motion of Rolling and on the Ratio between Plane and Curved] - Gotha (158/18 - foreword), Istanbul (SM Yeni Cami T 221/2). Facsimile edition of the Istanbul manuscript: al-Shirāzī [4] (204-228). German translation of the Gotha manuscript: Wiedemann [83] (220-223). Russian translation of the Istanbul manuscript by al-Dabbagh: al-Shirāzī [4] (175-203). Research: by al-Dabbagh and Rosenfeld - al-Shirāzī [4] (316-325), Dovlatova and Quliyeva [1], E. Grigorian and Dovlatova [1], Medvedev [1] (horn-shaped angles), Rosenfeld [37] (324-327), Wiedemann [79].

A1. [Astronomical Part of E1] - separate manuscript: Hamburg (225).

A2. Selections by Muzaffar al-Dīn (Ikhtiyārāt-i Muẓaffarī) P - Istanbul (NO 2773; SM AS 2574-2575, Fatih 5302/1; TK 3310-3311), Mashhad (Fazil. riyaz. 2), St. Petersburg (C 794) Tehran (384; Malik 3501; Uviv. 469), is quoted in KZ (I 199). Description of the St. Petersburg manuscript: Rosen [4] (300-317). The work is dedicated to Muzaffar al-Dīn Bulaq Arslan (d. 1305), the Chopanid ruler of Kastamonu.

A3. Gift to the Shah on Astronomy (al-Tuḥfa al-shāhiyya fī'l-hay'a) - Aligarh (Azad `Abd al-Hayy 643/20, 648/79), Baghdad (2957), Berlin (oct. 3363), Cairo (falak 3758, hay'a 55, 80), Calcutta (Buhar 348), Florence (306), Hyderabad (riyad 56, 1013), Istanbul (BU Ali Emiri 2736/1; Köprülü 927/1; SM AS 2584-2587, Carullah 1459, Fatih 3175/1, 3487, Yeni Cami I 220; TK 3305, 3307, 3309, 3321, 2226), Leiden (2516), London (398, 1344), Mashhad (7488), Oxford (I 791, 924, II 102/2), Paris (2516), Patna (2039, 2454), Princeton (Yehuda 310), Rampur (hay'a 8-10), Rome (Caetani 30/41), St. Petersburg (Univ. 670), Tehran (37/2, 4300/122; Senat 2250), is quoted in KZ (II 229). Research: Kennedy [19], Shermatov [1-5]. The work was written in 1285 in Sivas and dedicated to Taj al-Dīn Mu`tazz ibn Ṭāhir, the vizier of Amir-Shah Muḥammad ibn al-Ṣadr al-Sa`īd. Work in 4 chapters with titles coinciding with titles of 4 books of A1.

A4. Book: "I Made it and do not Blame [Me]" (Kitāb fa`altu falā talum) - Istanbul (SM AS 2668, Fatih 3175/2). Super-commentary on the commentary (No 652, A1) by al-Himādhī on the work (No 606, A10) of al-Ṭūsī. Al-Shirāzī demonstrates that al-Himādhī borrowed many texts from his works.

A5. Pearl of Miracles (Kharīdat al-`ajā'ib) - Oxford (I 1022).

A6. Sultan Zij (Zīj-i Sulṭānī) P - Tehran (184).

AG1. Limit of Comprehension in the Knowledge of Celestial Spheres (Nihāyat al-idrāk fī dirāyat al-aflāk) - Aligarh (Azad `Abd al-Hayy 626/3, 634/11), Baghdad (2981), Baku (M 225), Berlin (5682), Cairo (hay'a 56, Fāḍil hay'a 7/1, Ṭal`at hay'a 45), Florence (290), Hyderabad (Salar hay'a 26), Istanbul (Köprülü 657, 956-957; Millet Feyzullah 1349; SM Damat 851, Laleli 2145, Pertev 381, Selim. 381, Yeni Cami T 221/1; TK 3333-3334, 3336), Leiden (203), London (399; Ind. 7693 - a fragment), Manchester (751), Mosul (71/363), Oxford (I 924), Paris (2517/8), Patna (2060/1, 2452-2453), Tashkent (3758/4), Tehran (Univ. 925).
Edition of the chapter on the height of the atmosphere: Saliba [16] (446-464). German translations: Wiedemann [44] (geographical chapter), [108] (astronomical chapter). Research: Boyer [1] (rainbow), Kennedy [19] (motion of planets), Saliba [13] (motion of planets), [16] (the height of the atmosphere), Wiedemann [131] (optics), [133] (measuring the Earth), [180] (volumes of vessels), [184] (twilight and solar eclipses). Treatise in 4 books: 1) premises, 2) the celestial spheres, 3) measuring the Earth, 4) volumes and distances of planets and stars. Treatise also contains chapters on meteorology.

Ph1. [Part on Physics of E1].

Mu1. [Part on Music of E1]. Russian translation by Rajabov: al-Shirāzī [3].
PH1. Commentary on "Wisdom of Illumination" (Sharḥ Ḥikmat al-ishrāq). Edition: al-Shirāzī [1]. Commentary on the work (No 497, PH1) of al-Suhrawardī.

669. SALIH AL-SAKSAKI

Ṣāliḥ ibn `Umar al-Saksakī (d. 1314), mathematician.
See: KZ (V 20), MAMS (II 432).
M1. [Commentary on the "Sufficient on Arithmetic" of al-Karajī] - is mentioned in KZ. Commentary on the work (No 309, M1) of al-Karajı.

670. MUHAMMAD IBN AL-RAQQAM AL-AWSI AL-ANDALUSI

Abū `Abdallāh Muḥammad ibn Ibrāhīm ibn al-Raqqām al-Awsī al-Mursī al-Andalusī al-Ḥāsib (d. 1315) (al-ḥāsib = reckoner), born in Murcia, came from the Arab tribe of Aws, lived and died in Granada; physician, mathematician, and astronomer.
See: GAL² (II 378), IHS (III 695). MAA (159, 168-169), MAMS (II 432), SSM (138); by Carandell: Ibn al-Raqqām (18-25), Casiri [1] (I 352, II 82), Samsó [32] (ENWC).
M1. Work on Measuring Areas (Ta'līf fī'l-taksīr) - Rabat (2426).
A1. Treatise on the Science of Shadows (Risāla fī `ilm al-ẓilāl) - Escorial (II 918/11). Description of the manuscript: Derenbourg [7] (22-23). Facsimile edition of the manuscript: Ibn al-Raqqām [1] (237-252). Edition by Carandell: Ibn al-Raqqām [1] (255-315). Spanish translation by Carandell: Ibn al-Raqqām [1] (51-117). Research: Carandell [1] (on analemmas for finding the azimuth of Qibla), Ibn al-Raqqām [1] (119-218) Treatise on sundials in 43 chapters.
A2. Correct Zīj on the Sciences of Equations [of Planets] and Ephemerides (al-Zīj al-qawīm fī funūn al-ta'dīl wa'l-taqwīm) - Madrid (Nav. X/2).
A3. Complete Zīj (al-Zīj al-mustawfī) - Cairo (mīqāt 718/2 - a fragment).
A4. Poem on Operations with the Astrolabe (Manẓūma fī'l-`amal bi'l-asṭurlāb) - Cairo falak 3982). Poem in 55 chapters.
A5. [Treatise on Instruments Partially Invented or Improved by Him] - is mentioned by Casiri.

671. HASAN AL-ASTARABADI

Ḥasan ibn Muḥammad Sharqshāh al-Astarabādi (d. 1315), from Astarabad, astronomer.
See: GAL² (II 297), MAMS (II 433).
A1. Book on Ascensions (Kitāb al-maṭāli`) - Berlin (oct. 1487).

672. FATHI AL-HUSAYNI

Fatḥī ibn Ibrāhīm al-Ḥusaynī (13-14th c.).
See: MAMS (II 434).
E1. Book on Traditional and Rational [Sciences] (Ḥāwī al-manqūl wa'l-ma`qūl) - Tashkent (1835). Description of the manuscript: SVR (III 415-418).

673. `ABHD-ISHO` BAR BERIKHA

Abhd-īshō` bar Bērīkhā = Mar `Abd Yeshua (d. 1318), Syriac theologian and man of letters who wrote in Syriac and Arabic (Syriac `abhd = Arabic `abd = slave, Syriac īsh`` = Arabic `Isā = Hebrew Yeshua = Jesus). He was the Nestorian bishop of Sinjar (West of Mosul) in 1284-1285 and before 1290, the metropolitan of Nisibis and Armenia. He was for Nestorian Syrians what Abū'l-Faraj (No 633) was for Jacobites; he was known in Europe as "Ebediesus Sobiensis" (from Syriac name of Nisibis Ṣōbhā).
See: IHS (979-980); Baumstark [1] (323-325).
A1. [Poem on Calendar] Sy - is mentioned in the catalogue of his writings: `Abhd-Isho` [1].
Ph1. [Book on Nature] - only the medieval Armenian translation is extant. Edition of this Armenian translation with Russian translation by Vardanyan: "Abdh-Isho" [3].

PH1. Book of Pearl (Kethābha Marghānīthā) Sy. Edition: "Abhd-Isho" [2]. Latin translation by G. A. Assemani: see Mai [1] (I 3-331, II 317-336). English translation: Badger [1]. Christian theological treatise (Syriac Marghānīthā = Hebrew Margālith = Latin Margarita = the pearl), was written in 1297-1298 and translated by the author himself into Arabic in 1312.

674. KAMAL AL-DIN AL-FARISI

Kamāl al-Dīn Abu'l-Ḥasan Muḥammad ibn al-Ḥasan al-Fārisī (d. ca 1320), from Fars, pupil of al-Shirāzī (No 668), mathematician and physicist.

See: GAL (II 273), GAL² (II 295), IHS (III 707-708), KZ (II 257, 452, IV 471), MAA (159), MAMS (II 433-434), PI (II 246-249), SSM (154), STMI (400); Nazif [3, 7], Pingree [1 2] (DSB), [25] (EI²), Rashed [2], [6] (DSB), Suter [34], Wiedemann [191] (EI), [204] (IA),

M1. Memoir for Friends on Explanation of Amicable [Numbers] (Tadhkirat al-aḥbāb fī bayān al-taḥābb) = Treatise on Determining Amicable Numbers (Risāla fī istikhrāj al-a`dād al-mutaḥabba) - Cairo (riyāḍa 38 - incomplete, Kavala riyāḍa 111/2 - anonymous, Taymur riyāḍa 135/2 - anonymous), Istanbul (Köprülü 941/2). Photo-reproduction of one page from the Cairo manuscript: SSM (309). Edition: Rashed [24] (229-266). Research: Aghargün and Fletcher [1], S. Brentjes [7], Ja`fari Naini [1] (50-55), Rashed [24].

M2. Bases of Rules on Elements of "Uses" (Asās al-qawā`id fī uṣūl al-Fawā'id) - Cairo (riyāḍa 38 - incomplete, Kavala riyāḍa 111/1, Taymur riyāḍa 135/1), Hyderabad (Sa`id riyāḍa 1), Istanbul (Köprülü I 941/1; TK 3132, 3140, 3155), Patna (2012, 2417 - the copy written by al-Birjandī, (No 938) is quoted in KZ (IV 471). Commentary on the work (No 657, M1) of ibn `Irāqī. Edition by Mawaldi : al-Fārisī [2]

M3. [Commentary on Book XIII of "Exposition of Euclid" of al-Ṭūsī] - Leiden (14/14). Commentary on the work (No 606, M1) of al-Ṭūsī

M4. Treatise on Exposition of al-Abharī on a Known Problem of the Book of Euclid (Risāla `alā taḥrīr al-Abharī fī'l-mas'ala al-mashhūra min kitāb Uqlīdis) - Tunis (Ahmad. 5482/5). Commentary on the work (No 595, M1) of al-Abhārī.

Ph1. Book of Correction of Optics for Those who have the Sight and Mind (Kitāb tanqīḥ al-manāẓir li dhawī al-abṣār wa'l-baṣāir) - Cairo (tabi`at 368), Istanbul (SM AS 2598; TK 3340), Leiden (201), St. Petersburg (Nat. ANS 600/3), Tehran (40, 167). Edition: al-Fārisī [1]. Research: Nazif [3, 7], Rashed [6], Wiedemann [36] (refraction of light), [124] (general research), [130] (structure of the eye). Revision of the work (No 328, Ph1) of Ibn al-Haytham.

Ph2. Book of Insight on the Science of Optics (Kitāb al-baṣā'ir fī `ilm al-manāẓir) -Istanbul (SM AS 2451, Esat 2006).

Ph3. On the Halo and the Rainbow (Fī'l-hāla wa-qaws quzaḥ) - Tehran (Zanjānī 93/6). Research: Wiedemann [56]. Revision of the treatise (No 328, Ph9) of Ibn al-Haytham.

Ph4. Exposition of "Book on Shapes of Eclipses" (Taḥrīr maqāla fī ṣuwar al-kusūf). Majority of manuscripts of this treatise of Ibn al-Haytham, in particular St. Petersburg (Nat. ANS 600/4,) are revised by al-Fārisī. Edition: al-Fārisī [1] (II 381-401). Research: Wiedemann [55], [118]. Revision of the treatise (No 328, Ph8) of Ibn al-Haytham.

Ph5. Exposition of "Book on Burning Sphere" (Taḥrīr maqāla fī'l-kura al-muḥriqa). Majority of manuscripts of this treatise of Ibn al-Haytham are revised by al-Fārisī. Edition: al-Fārisī [1] (II 285-302). Research: Wiedemann [37]. Revision of the treatise (No 328, Ph5) of Ibn al-Haytham.

675. MUHAMMAD IBN RUSHD

Abu `Abdallāh Muḥammad ibn `Umar ibn Rushd (1259-1321), from Ceuta, worked in Granada, died in Fas; mathematician, astronomer, and geographer.

See: MAA (159), MAMS (II 434); Casiri [1] (II 86).

676. `ABD AL-RAZZAQ IBN AL-FUWATI

Kamāl al-Dīn Abu'l-Faḍl `Abd al-Razzāq ibn Aḥmad ibn Muḥammad ibn al-Fuwaṭī al-Baghdādī (1244-1326), born in Baghdad; librarian of the Maragha observatory of al-Ṭūsī (No 606).

See: KZ (II 104, 416, 574, III 117, 220, V 83, 390, 623, 628), MAMS (II 434-435); Rosenthal [9] (EI²).

HS1. Collection of Information in the Order of Names and Ranks (Majma` al-ādāb `alā mu`jam al-asmā fi mu`jam al-alqāb). Abridgement: HS2.

HS2. Abridgement of "Collection of Information in the Order of Ranks (Talkhīṣ Majma` al-ādāb fi mu`jam al-alqāb). Editions: al-Fuwaṭī [1-2]. Research: Buniatov [1-2].

677. AHMAD AL-QALANISI

Aḥmad ibn Abī Bakr ibn `Alī ibn al-Sarrāj al-Qalānisī (d. 1346), mathematician. Sometimes is confused with al-Ḥamawī (No 732).

See: MAMS (II 435).

M1. Treatise on Geometry (Risāla fi'l-handasa) - Princeton (Yehuda 296).

678. MUHAMMAD AL-KINANI

Abū `Abdallāh Muḥammad ibn Muḥammad ibn `Abdallāh ibn Jamā`a al-Kinānī (d. ca 1330), from Malaga; jurist, mathematician, astronomer, knowledgeable in philosophy and history.

See: GAL[2] (II 111-112), MAA (159-160), MAMS (II 435), SSM (68); Casiri [1] (II 83).

A1. Essence of Rules and Limit of Aims (Khulāṣat al-qawā`id wa ghāyat al-maqāṣid) - Cairo (Zaki 9 - anonymous, there is another Cairo manuscript with the name of author).

679. MUHAMMAD IBN AL-UKHUWWA

Ḍiyā al-Dīn Muḥammad al-Qurashī al-Shāfi`ī "Ibn al-Ukhuwwa" (d. 1329), Egyptian or Syrian muhtasib (examiner of measures and weights).

See: IHS (III 998-999).

Me1. Approximate Features of Norms for Examining Measures and Weights (Ma`ālim al-qurba fi aḥkām al-ḥisba). Edition with English summary by R. Levy: Ibn al-Ukhuwwa [1]. English abstract of Levy: in the book Ibn al-Ukhuwwa [1]. Description: in ISH.

680. ABU 'L-FIDA AL-AYYUBI

`Imād al-Dīn Abū'l-Fidā Ismā`īl ibn `Alī ibn Maḥmūd ibn `Umar al-Ayyūbī (1273-1331), born in Damascus, from the family of Ayyubids; governor of Hama under Mamluk sultan al-Naṣīr Muḥammad (1293-1294), later was ruler of Hama, died in this city. He was a famous geographer and historian.

See: AGL (386-394), GAL (II 55-57), GAL[2] (II 44), HMA (II 277), IHS (I 793-799), KZ (II 393-395, III 9, V 160, 316, 447-449), MAA (160), MAMS (II 435-436), PI (I 139-146, II 356), PL (II 128-129); Brockelmann [5] (EI), Calvo [5] (ENWC), Chaix [1], Gibb [1] (EI[2]), Jourdain [2], Vernet [8] (DSB). Collection of papers: "Abu'l-Fida" [1].

A1. Hidden Mystery on Operations with Zīj in Verse (al-Sirr al-maktūm fi'l-`amal bi'l-zīj al-manẓūm) - Oxford (218/1). Research: Kennedy [36] (18).

G1. Ordering Countries (Taqwīm al-buldān) = Climates of Countries and Their Ordering (Aqālīm al-buldān wa taqwīmihā) - Cairo (Ṭal`at mīqāt 102/7 - fragment on mathematical geography), Istanbul (BU 4689; SM AS 2597, Carullah 1581/2), Leiden (57), Mashhad (5251), Mosul (28/86, 267/1), Oxford (I 899, 903, 912), Paris (5834), Rampur (I 663/516), Rome (Vat. 266), Vienna (1266 - incomplete). Edition by Reinaud and de Slane: Abu'l-Fida [4], French translation by Reinaud and Guyard: Abu'l-Fida [3]. Many partial editions and translations, in particular, French translation of chapter on Arabia: de la Roque [1], Russian translations of chapter on Arabia by Vyshnegorskiy: Abu'l-Fida [5], on Africa: Kubbel' and Matveyev [2]. Research: Chaix [1], Hammer-Purgstall [4], de la Roque [1], Sarton [2].

H1. Concise History of Mankind (Mukhtaṣar ta'rīkh al-bashar) - edition by Adler with Latin translation by Reinaud: Abu'l-Fida [1], other edition: Abu'l-Fida [2].

681. MUHAMMAD IBN HANI

Muḥammad ibn `Alī ibn Hānī (d. 1332); knew inheritance well.

See: KZ (I 247), MAMS (II 436).

M1. Poem on Inheritance (Urjūza fi'l-farāiḍ) - is mentioned in KZ.

682. AMIN AL-DIN AL-ABHARI

Amīn al-Dīn al-Abharī (d. 1333), mathematician.

See: GAL (II 273), IHS (III 697-698), MAA (160), MAMS (II 436); Pingree [37] (EIr).

M1. Sufficient Chapters for Arithmetic using a Board and Stick [with Sharp End] (Fuṣūl kāfiyya fī ḥisāb al-takht wa'l-mīl) - Berlin (5975). Description of the manuscript: Ahlwardt [1] (333-334). Research: Wiedemann [185]. Arithmetic treatise in 10 chapters.

PH1. Treatise on Logic (Risāla fī'l-manṭiq) - Cairo (riyāḍa 54/2).

683. IBRAHIM IBN MAMDUD

Ibrāhīm ibn Mamdūd (13th c.), Yemeni astronomer, teacher of (No 685) Ibn al-Malik, is mentioned on the last page of the work (No 685, A2).

See: SSM (132).

684. HASAN AL-FIHRI

Ḥasan ibn ʿAlī al-Fihrī (13th c.), Yemeni astronomer, teacher of (No 685) Ibn al-Malik, is mentioned on the last page of the work (No 685, A2).

See: SSM (132).

685. ʿUMAR IBN AL-MALIK

Abū'l-Fatḥ al-Sulṭān al-Ashraf ʿUmar ibn al-Malik al-Muẓaffar Yūsuf ibn ʿUmar (d. ca 1330), third Rasulid Sultan of Yemen in 1295-1297; astronomer and constructor of astrolabes; the astrolabe that he made in 1291 is now kept at the Metropolitan Museum of Art in New York.

See: GAL (I 605), GAL² (I 901), IHS (III 1637), KZ (II 179), MAA (160-161), MAA² (177), MAMS (II 436-437), MAY (27-29), SSM (132), TIFI (234); Lane-Poole [1] (99-100).

A1. Book of Introduction to the Science of Stars (Kitāb al-tabṣira fī ʿilm al-nujūm) - Oxford (I 905).

A2. Guide for Pupils in the Construction of the Astrolabe (Muʿīn al-ṭālib ʿalā ʿamal al-asṭurlāb) - Cairo (Taymūr riyāḍa 105). Description of the manuscript: MAY (28-29).

Ph1. [Treatise on Magnetic Compass]. Research: Banerjee and Sabra [1].

686. NIZAM AL-DIN AL-NAYSABURI

Niẓam al-Dīn al-Ḥasan ibn Muḥammad ibn Ḥusayn al-Aʿraj al-Qummī al-Naysābūrī (13-14th c.), probably born in Qumm, Northern Iran, and studied in Nishapur, Khurasan; mathematician and astronomer; worked in the observatory of al-Shīrāzī (No 668) in Tabriz under Ilkhanid Rulers Ghazan Khan (1295-1304) and Uljaytu (1304-1317).

See: GAL (II 256), GAL² (II 273), IHS (III 698), KZ (II 268, 381, 563, 567, IV 5, 76, 307, V 386, VI 17), MAA (161), MAA² (177), MAMS (II 437-439, III 368), SSM (155), STMI (341, 414); Matviyevskaya and Tllashev [6] (30-32).

HS1. Works of the Sultan of Scientists and Researchers Khwāja Naṣīr al-Dīn Muḥammad ibn Muḥammad al-Ṭūsī, May his Grave be Sanctified (Taṣānīf sulṭān al-ḥukamā wa'l-muḥaqqiqīn khwāja Naṣīr al-Dīn Muḥammad ibn Muḥammad al-Ṭūsī, quddisa qabruhū) - Tashkent (1693/8). Russian translation: Matviyevskaya and Tllashev [6] (98-105). Research: Tllashev [3]. List of the works of al-Ṭūsī (No 606).

M1. Treatise on Arithmetic (al-Risāla al-shamsiyya fī'l-ḥisāb) = Treatise on Principles of Arithmetic (al-Risāla al-shamsiyya fī'l-uṣūl al-ḥisābiyya) - Aligarh (Jawāhir 437; Subh. Sup. 511/4), Ashqabad (253/1), Baku (A 1059/1), Bukhara (250), Cairo (falak 3957/5, 8531/2, riyāḍa 823/1, Taymūr riyāda 278/3), Calcutta (Buhar 338/1), Dushanbe (1266, 1280, 2136/2, 3, 5, 3070/11; Ferd. 1143, 2043/3; IZA 31, 202/3), Hyderabad (Said riyāḍa 1, 103/3), Istanbul (BU Veliyuddin 2325; Ragıp 919; SM AS 2725, Selim 731), Leiden (204/3), London (Ind. 748-749), Manchester (352 C), Mashhad (132; Nawwab 19), Moscow (87/2), Mosul (Hajiyat 136, Jalili 49), Munich (346/3), Najaf (Ayatallah 135), Oxford (I 1011/1, II 289/3), Princeton (Yehuda 4110), Kazan (1055), St. Petersburg (B 842/1, 871/13, 2991/1 - incomplete, 3118, C 1330/12; Univ. 90/6), Tashkent (1693/1, 5513/1, 6023/10, 6125/1, 6131/7, 9, 6175/1, 6425/6, 7822/4, 8044/6, 8152/30), Vienna (1027/2); is quoted in KZ (IV 76). Research: Matviyevskaya and Tllashev [6] (111-122), Tllashev [2].

Treatise in 4 parts: 1) arithmetic of integers and fractions, 2) extraction of roots of any power and sexagesimal arithmetic, 3) geometry, 4) algebra. It is devoted to Shams al-Dīn `Abd al-Laṭif, son of historian Rashīd al-Dīn (No 656). The words (al-Risāla al-shamsiyya) in the title of the treatise can be translated also as "Treatise for Shams al-Dīn". Unlike analogous treatises of al-Ṭūsī (No 606, M17) and al-Abharī (No 595, M1), in this treatise all calculations are made on paper by a pen instead of using the sharp end of a stick on a dust covered board.

M2. Commentary on " al-Shāfiyya " (Sharḥ al-Shāfiyya) - Rampur (I 536). Commentary on the work (No 606, M5) of al-Ṭūsī.

A1. Opening of Truths of Ilkhanid Zij (Kashf al-ḥaqā'iq Zīj-i īlkhānī) P - Bombay (41), Istanbul (SM AS 2696, Fatih 3421), London (11215), Mashhad 3835, 3947-3948, 5441, 7732-7733, Mawlawi), Najaf (Amir), Paris (782), Rampur (1203), St. Petersburg (C 618), Tabriz (3642), Tehran (7843; Malik 5901), is quoted in KZ (III 563). Research: Mamedbeyli [6] (85-95). Commentary on the work (No 606, A8) of al-Ṭūsī.

A2. Commentary on "Exposition of Almagest" (Sharḥ Taḥrīr al-Majisṭī) = Commentary on "Exposition" (Sharḥ Taḥrīr) - Berlin (oct. 3031, folio 4182), Cairo (Kavala hay'a 1, Ṭal'at hay'a 46 - both manuscripts are anonymous), Hyderabad (riyāḍa 98, 347), Istanbul (BU Veliyuddin 2309; NO 2942; SM Yeni Cami 798, 800), London (392, Sup. 7476), Manchester (Lind. 298), Rampur (I 930), Tehran (Malik 3340; Senat 2271; Univ. 864), Vienna (1085), is quoted in KZ (V 386). Commentary on the work (No 606, A1) of al-Ṭūsī.

A3. Commentary on "Memoir" (Sharḥ Tadhkira) = Explanation of "Memoir" (Tawḍīh al-Tadhkira) - Aligarh (Azad `Abd al-Ḥayy 664/41, 665/42, Subh. 520/100, Sul. 163/23), Baghdad (2968), Baku (B 783, IS 47), Beirut (193), Cairo (hay'a 54, 66, 88), Damietta (Institute), Hyderabad (riyāḍa 410; Salar hay'a 6), Istanbul (SM Fatih 3496-3498, Yeni Cami 7921; TK 3324), Jaipur (21, 22), Leiden (1010), London (396, 1342/3), Mashhad (5346-5347, 5349; Nawwab 14; Univ. 309), Paris (2510), Patna (2447-2448), Princeton (Yehuda 918), Kazan (170), Rampur (I 931), Tehran (168; Mu`tamid 215/1; Senat 2243), Vienna (1114), is described in KZ (II 268). Commentary on the work (No 606, A10) of al-Ṭūsī.

A4. Commentary on "Thirty Chapters" (Sharḥ-i Sī faṣl) P - Hyderabad (riyāḍa 411), Istanbul (SM AS 2664), Leiden (1178), Tashkent (8990/5). Commentary on the work (No 606, A16) of al-Ṭūsī.

A5. Commentary on "Twenty Chapters on Astrolabe" (Sharḥ-i Bīst bāb dar asṭurlāb) P - Tehran (336, 4884/5; Univ. 629, 904). Commentary on the work (No 606, A14) of al-Ṭūsī.

A6. Almucantar Quadrant (Rub`-i muqanṭar) P - Mashhad (89).

A7. Treatise on Determining the Azimuth of Qibla (Risāla fī ma`rifat samt al-Qibla) - Cairo (Taymūr riyāḍa 278/4 - anonymous), is mentioned in A3.

A8. Zīj of `Alā' al-Dawla (Zīj al-`Alā'ī) P - is mentionned in KZ (II 567). Research: Pingree [59].

687. `ALI SHAH AL-KHWARIZMI AL-BUKHARI

`Alā al-Dīn `Alī-shāh Muḥammad ibn Qāsim al-Khwārizmī al-Bukhārī (1226-1300), probably born in Khwarizm and worked in Bukhara.

See: KZ (I 170, 318, III 565, IV 15), MAA (161, 227), MAMS (II 439-440, III 369), PL (II 61-62), SSM (154); Pingree [58] (EIr), Yaqubov and Sobirov [1].

A1. Zīj of Khwarizmshah (Zīj-i Khwārizmshāhī) P - Dushanbe (IZA 255). Description of the manuscript: Babayev [2].

A2. Trees and Fruits (Ashjār wa athmār) = Book on Fruit Tree (Kitāb-i shajara-yi thamara) P - Aligarh (Azad. Subh. 2, 18, 23), Baghdad (Sup. 315), Berlin (342), Bombay (Firuz 24-25; Univ. 26), Cairo (Ṭal`at falak farisi 13/1, hay'a farisi 8/1), Cambridge (Browne 0. 8), Glasgow (7), Hyderabad (riyāḍa 17), Istanbul (BU Veliyuddin 2264; NO 2776-2777; SM AS 2688, 2795/2, Esat 1964), London (Ind. Ross 140), Manchester (Lind. 695, 716a), Mashhad (3-4), Peshawar (1958), Rasht (75/1, A 778), Tbilisi (51/86), Tehran (153, 2112, 2444/3; Malik 603, 3227, 3355, 3414; Mahdawi 421; Milli 155; Mu`tamid 117/9; Nafisi 13/1; Sipahsalar 656-657, 8246/2; Univ. 498/1, 499, 831, 1525, 4520, 5131, Ilah. 8/1, 128, 748, Huquq 285), Yazd (Waziri 458), is quoted in KZ (I 318). Turkish translation by `Abd al-`Aziz: Cairo (mīqāt turki 26). Edition: Ali Shah al-Bukhārī [1]. Treatise on principles of astronomy and astrology dedicated to Shams al-Dunyā wa'l-Dīn Muḥammad ibn Mubārak Shah, son of Mubarak Shah (1266) Chagatay khan of Transoxania.

A3. Ilkhanid Reference (al-`Umda al-īlkhāniyya) = (Shah Zīj (Zīj-i shāhī) - Paris (781) under the first title, is quoted in KZ (III 565) under the second title. French translation of chapter on Indian circle and determining the azimuth of Qibla: L. Sédillot [5] (98-101). Commentary on "Ilkhanid Zīj" (No 606, A8) of al-Ṭūsī.

A4. Treatise of Motions of Planets (Risāla fī tasyīrāt nujmiyya) - Mashhad (5308).

A5. Annual Predictions (Aḥkām-i a`wām) P - Berlin (343), Bombay (Firuz 3; Nadhir 255), Cairo (Ṭal`at falak farsi 4/1), Calcutta (Curz. 644), Istanbul (NO 2767; SM Esat 1966), Jerusalem (Khalidi 16), London (6285; Ind. Ross. 141). Mashhad (81), Paris (2384-2385), Tashkent (591/1), Tehran (Dihkhuda 233; Malik 2452, 3259, 3291; Sipahsalar 92; Univ. 948, 1418/2, 2452/9, Ilah. 181/1, 491).

688. MUHAMMAD AL-KAMALI

Muḥammad ibn Abī `Abdallāh Sanjar al-Kamālī, known as "Sayf [al-Dīn]-i Munajjim" (13-14th c.), Persian astronomer, worked in Yazd.

See: MAMS (II 440), PL (II 64-65).

A1. Zij of Ashraf (Zīj-i Ashrafī) P - Paris (784/1). Description of the manuscript: Blochet [2] (61). Research: SIAT (124), Hogendijk [28], Kennedy [36]. The Zīj was written in 1303.

A2. Commentary on "Exposition of Principles" (Sharḥ-i Mujmal al-Uṣūl) P - Madras (Firuz 35), Tashkent (506, 2572/36). Description of the Tashkent manuscript 2572/36: SVR (I 226-227). Commentary on the work (No 308, A1) of Ibn Labbān, was written in 1304.

689. AL-SULTAN AL-MU'AYYAD

al-Sulṭān al-Mu'ayyad Dāwūd ibn Yūsuf (d. 1321), Rasulid Sultan of Yemen (1297-1321), brother of (No 685) ibn al-Malik; astronomer.

See: MAY (33); Lane-Poole (99-100).

A1. Treatise on the Construction of Astrolabe (Risāla fī `amal al-asṭurlāb) - Sana'a (al-Akwa).

690. IBRAHIM AL-JA`BARI

Burhān al-Dīn Abū'l-`Abbās Ibrāhīm ibn `Umar ibn Ibrāhīm ibn Khalīl al-Ja`barī (1242-1333); theologian and astronomer.

See: GAL (II 132-133), GAL² (II 134-135), MAMS (II 441).

A1. Sapphires of Timekeeping (Yawāqīt al-mawāqīt) - Princeton (Yehuda 1168).

691. SHAMS AL-DIN MUHAMMAD AL-DIMASHQI

Shams al-Dīn Abū `Abdallāh Muḥammad ibn Ibrāhīm al-Anṣārī al-Ṣūfī al-Dimashqī (1256-1337), geographer and astronomer, worked in Rabwa, Syria.

See: AGL (382-386), GAL (II 161), GAL² (II 161), IHS (III 800-802), KZ (II 226, VI 315-316), MAMS (II 440-441); Brockelmann [8] (EI), Dunlop [8] (EI²).

AG1. Selections of Epoch on Miracles of Land and Sea (Nukhba al-dahr fī `ajā'ib al-barr wa'l-baḥr) - Berlin (6042), Cairo (VI 64), Copenhagen (96), Istanbul (SM AS 2945), Leiden (464), London (384), Paris (2187, 5858). Editions: al-Dimashqi [1, 3]. French translation by Mehren: al-Dimashqī [2]. Research: Haarbrückner [1] (general research), Wiedemann [42] (107-113) (problems of chemistry).

692. MUWAFFAQ AL-QAYSARI

Muwaffaq al-Qayṣarī (13-14th c.), from Kayseri (Turkey), astronomer.

See: KZ (II 593), SSM (155).

A1. Essence of Astronomy (Zubda al-hay'a) P - Cairo (Fāḍil hay'a farisi 1), Tbilisi (AS 584/1 - anonymous). Arabic translations: Dublin (Beatty 4933), Princeton (Yehuda 4066). SHIM (497) and PL (II 60) attribute this work to al-Ṭūsī (No 606). Treatise in 30 chapters.

693. BADR AL-DIN AL-HAMAWI

Ṣadr al-Dīn Muḥammad ibn Ibrāhīm ibn Ṣa`dallāh ibn Jamā`a al-Kinānī al-Ḥamawī (13-14th c.), from Hama, astronomer.

See: GAL (II 89-90), GAL² (80-81), SSM (60).

A1. Concise Book on Operations with the Astrolabe (Mulakhkhaṣ al-albāb fī'l-`amal bi'l-asṭurlāb) - Cairo (Fāḍil miqāt turkī 6/1). Treatise in 60 chapters written in 1285/1286.

694. SHAMS AL-DIN AL-BUKHARI

Shams al-Dīn Muḥammad ibn Mubārakshāh Mīrak al- Bukhārī al-Harawī (d. ca 1340), Persian philosopher and astronomer.

See: GAL (II 275), IHS (III 699), KZ (III 103, VI 474), MAA (161, 219-220), MAA² (177), MAMS (II 441-442), STMI (506).

E1. Commentary on "Wisdom of Source" (Sharḥ Ḥikma al-`ayn) - Aligarh (Azad. Subh. Sup. 110/60), Berlin (5081-5082), Bombay (252), Cairo (VI 97), Calcutta (81; Buhar 325; Madrasa 316), Cambridge (Sup. /2 296), Hyderabad (falsafa 379; Salar falsafa 44/1, 51-53), Istanbul (SM Damat 1433, Selim. 36, 673-674), London (1351, Sup. 427, 726, Ind. 498-501, 584/2, 594/2), Manchester (411), Mashhad (165, 169, 706-711, 716, 1093; Farhang 36/2), Patna (1897, 2829), Peshawar (1683), Princeton (Houtsma 2065/2, 2137), Rampur (I 395/98, 100), Rasht (X21), Strasbourg (17), St. Petersburg (A 671, 1354, B 3485, 3487, 3523, 4511, C 905/1, 1163, 1178, 1242/1, 1266, 1279/1, 3, 1613, 1746/1, 2004/1, 2021, 2044/1, 2282/1; Nat. 99), Tashkent (739, 1782, 1964-1965, 2452, 2541, 3667, 3747, 3994, 5088, 5247, 5279, 5322, 5325, 5773, 6198, 6238, 6378, 6409, 6463, 6499, 6889, 6903, 7191/1, 7854, 8518, 8748, 8930, 8947/2; SADUM 66, 113, 150, 702, 930, 1131, 1157, 1573, 1575, 1581, 1644, 1659, 1681, 1772, 1920), Tehran (6/4, 119, 132), Uppsala (II 186, 198-199), Yazd (Waziri 688), is quoted in KZ (III 103). Edition: al-Bukhari [1]. Commentary on the work (No 616, E1) of al-Kātibī al-Qazwīnī.

E2. Commentary on "Guide to Philosophy" (Sharh Hidayat al-ḥikma) - Calcutta (Buhar 321), London (Ind. 493), Rampur (107), Tashkent (3096/1). Commentary on the work (No 595, E1) of al-Abharī.

M1. Commentary on Substantional Propositions (Sharḥ Ashkāl al-ta'sīs) - Budapest, Mashhad (5562). Commentary on the work (No 655, M1) of al-Samarkandī.

A1. Zij (Syntaxis). Only the Byzantine translation is extant: Florence (Lor. 28/17). Edition of chronological chapter: Olivieri [1] (85-89). In the translation the author is named Samps Bouchares. Research: Neugebauer [4] (31-40), Usener [1].

A2. Knowledge of the Northern Astrolabe (Ma`rifat-i asṭurlāb-i shimālī) - Istanbul (TK 3327/4).

A3. Commentary on "Introduction" (Sharḥ al-Tabṣira) - Istanbul (SM AS 2582). Commentary on the work (No 469, A2) of al-Kharaqī.

A4. Commentary on the "Compendium" of al-Jaghmini (Sharḥ al-Mulakhkhaṣ al-Jaghmīnī) - Mashhad (167). Commentary on the work (No 547, A1) of al-Jaghmini.

695. MUHAMMAD IBN SIM`UN

Naṣīr al-Dīn Muḥammad ibn Sim`ūn (d. 1336), timekeeper in Egypt or Syria.

See: GAL (II 155), IHS (III 696), MAA (162), MAMS (II 442-443), SSM (60).

A1. Gift on Astronomical Questions and Answers (al-Tuḥfa al-malakiyya fī'l-as'ila wa'l-ajwiba al-falakiyya) - Cairo (mīqāt 25). The treatise contains 21 questions and answers on timekeeping.

A2. Treasure of Pupils on the Construction of the Astrolabe (Kanz al-tullāb fī `amal al-asṭurlāb) - Paris (2524/3). Abridgement of the work (No 431, A1) of Abī'l-Ṣalt Umayya.

A3. Useful Principles on Operations with the Hidden Quadrant (al-Uṣul al-thamira fī'l-`amal bi rub` al-musātar) - Cairo (Kavala mīqāt 2/3). Treatise in 18 chapters.

A4. Limit of Lucidity on Operations with the Hidden [Instrument] (Nihāyat al-musāmara fī'l-`amal bi'l-musātara) - Cairo (Kavala mīqāt 2/4), Dublin (Beatty 4833/2 - anonymous).

A5. Healing Hearts on Operations with the Engraved Balance (Shifā' al-ṣudūr fī `amal al-mīzān al-maḥfūr) - Cairo (Kavala mīqāt 2/5). Treatise in 20 chapters.

696. AHMAD IBN AL-BANNA

Abū'l-`Abbās Aḥmad ibn Muḥammad ibn `Uthmān al-Azdī al-Marrākushī (ca 1260 - ca 1340) was known by the name "Ibn al-Banna" (son of an architect), born in Marrakech (Morocco), lived and died in this city; mathematician and astronomer.

See: GAL (II 330-331), GAL (II 363-364), IHS (II 998-1000), KZ (I 399, II 400, V 74, 193), MA (47-48, 104), MAA (162-164), MAA³ (173), MAMS (II 443-446. III 369), SSM (138-139, STMI (385); Aballagh [2], Calvo [5a] (ENWC), Marre [1], Renaud [4], Sams and Millas [1], Tuqan [1] (429-432), Suter and Ben Cheneb [1] (EI), [2] (IA), [3] (EI²), Vernet [2, 5], [10] (DSB).

Collection of papers: "Ibn al-Bannā" [1].

Research: Samsó and Millas [2].

M1. Concise Exposition of Arithmetic Operations (al-Talkhīṣ fī 'amal al-ḥisāb) - Algiers (613/3), Beirut (232/3), Cairo (falak 8522/1, riyāḍa 16/1, Taymur maj. 82/11, Zaki 678), Escorial (II 248/11, 748/18, 933/1, 948/1, 954/1), Fas (Zawiya 96, 210), Istanbul (SM Laleli 2700/2, 2709, 2765/2), London (180, 417; Ind. 770/1), Oxford (I 207/4), Princeton (Yehuda 240), Rabat (526/2), St. Petersburg (Univ. 757/23), Tehran (Senat 2672). Tetuan (227), Tlemsen (30), Tripoli (T 26/2, 3, Um. 1095).
Descriptions of the Escorial manuscripts: Derenbourg [1] (153), [2] (80), [7] (44-45, 79, 85). Edition with French translation by Souissi: Ibn al-Bannā [3]. French translation by Marre: Ibn al-Bannā [1]. French translations of some chapters according to commentaries of Ibn al-Majdī (No 815, M3) and al-Qalaṣādī (No 865, M7): Woepcke [15] (on rules of summation), [16] (58-62 - on figures ghubar). Research: Aballagh [1], Borho [2], Dobrovol'skiy, Qahhorov, and Khojiyev [1], Ja'fari Naini [1] (56-57) - on amicable numbers. Treatise in 2 parts: 1) " known Numbers" (arithmetic of integers and fraction, including extraction of roots), 2) "Finding Unknown [Quantities]" (proportions and algebra).

M2. Book of Conversations on Arithmetic (Kitāb al-maqālāt fī'l-ḥisāb) - Berlin (5974), Cairo (Fāḍil riyāḍa 33), Damascus (89/3), Istanbul (SM Laleli 2720), Tunis (1031). Description of the Berlin manuscript: Ahlwardt [1] (332-333). Edition of the Istanbul manuscript by Sa'idan: Ibn al-Bannā [4]. Book in 4 parts "conversations": 1) arithmetic of integers, 2) arithmetic of fractions, 3) extraction of roots, 4) proportional quantities.

M3. Awakening of Hearts for Problems of Arithmetic (Tanbīh al-albāb 'alā masā'il al-ḥisāb) - Algiers (613/6), London (420/8).

M4. Deliverance from Arithmetic Operations (Takhlīṣ a'māl al-ḥisāb) - Tunis (Souissi). French translation: Souissi [4] (chapter on perfect and amicable numbers).

M5. Treatise on the Science of Measurement (Risāla fī 'ilm al-misāḥa) - Berlin (5945), Tangier (II 56). Description of the Berlin manuscript: Ahlwardt [1] (321).

M6. Book on Algebra and Almucabala (Kitāb fī'l-jabr wa'l-muqābala) - Cairo (Fāḍil riyāḍa 1), Istanbul (SM AS 2761), Tehran (Senat 2672/5).

M7. Concise [Book] for Pupils (Mukhtaṣar kāfī li'l-muṭallib) - Milan (246). Arithmetic treatise.

M8. Removal of the Veil from Kinds of Arithmetic Operations (Raf' al-ḥijāb 'an wujūh a'māl al-ḥisāb) - Istanbul (SM Vehbi 1006), Tunis (Nat. 9722). Edition of chapter on amicable numbers: Rashed [24] (218-221). Research: Aballagh [1].

M9. On Measurement (Fī'l-taksīr) - Tunis (Nat. 9002).Description of the manuscript: Djebbar [1] (34). Edition, French translation and research , Aballagh [1b] Research by Aballagh : Benoit, Shemla and Ritter [1], (247-258), Aballagh [1a], Aballagh and Djebbar [2].

M10. Canon on Inheritance (al-Qānūn fī'l-farāiḍ) - Cairo ('aqā'id 3964/5).

M11. Principles and Premises of Algebra and Almucabala (al-Uṣūl wa'l-muqaddimāt fī'l-jabr wa'l-muqābala) - is mentioned in KZ (I 339). al-Qalaṣādī (No 865) mentions in his commentary M1 the following mathematical works of Ibn al-Bannā:

M12. Introduction to Euclid (Muqaddima li Uqlīdis).

M13. On Binomials and Residues (Fī dhawāt al-ismayn wa munfaṣilāt).

M14. On proportions (Fī'ltanāsubāt).

A1. Guidebook for the Pupil to Equations of Planets (Minhāj al-ṭālib li ta'dīl al-kawākib) - Algiers (1454/1), Dublin (Beatty 4087), Escorial (II 909/1), Madrid (Nav. X/1), Oxford (I 393). Description of the Escorial manuscript: Derenbourg [7] (7-8). Edition of introduction with Spanish translation: Vernet [1]. Complete edition with Spanish translation: Vernet [2].

A2. Rule of Transit of the Sun and Moon through Lunar Stations and Determining Time at Night and Day (Qānūn li tarḥīl al-shams wa'l-qamar fī'l-manāzil wa-ma'rifat awqāt al-layl wa'l-nahār) - Cairo (Ṭal'at mīqāt 160/2 - anonymous), Fas (Zawiya 21/87), London (407/2), Tunis.

A3. Book of Simplification on Ephemerides of Planets (Kitāb al-yassāra fī taqwīm al-kawākib al-sayyāra) - Cairo (mīqāt 924). London (977/7, Sup. 9599), Tripoli (Um. 1179).

A4. On Prescriptions of Stars (Fī aḥkām al-nujūm) - Cairo (Fāḍil mīqāt 204/2, Zaki 714/1), Istanbul (SM Şehit 2774/3), Jerusalem (Yehuda 158/7).

A5. Commentary on Poem of Abu'l-Muqri' (Sharḥ Manẓūmat Abī'l-Muqri'). Abridgement: (No 851, A1) of al-Samlālī. Commentary on the work (No 722, A1) of al-Baṭṭīwī.

A6. Introduction to [the Science on] Stars and Natures of Letters (Madkhal al-nujūm wa ṭabā'i' al-ḥurūf) - Cairo (V 314).

A7. Almanac (al-Manākh) - London (977/11).

A8. Book on Anwa' (Kitāb al-anwā') - Paris (2060/1).
A9. [Treatise on Predictions of Stars] - Cairo (Fāḍil mīqāt 204/2, Zaki 714/1), Istanbul (SM Şehit 2774/3). French translation: Ibn al-Bannā [2]. al-Qalaṣādī (No 865) mentions in his commentary on M1 following astronomical works of Ibn al-Bannā:
A10. [Treatise on Tympanum Shakāziyya].
A11. [On Determining the Azimuth of Qibla]. Fragment: Escorial (II 918/16).
A12. [Objection to the Saying the Time of Sunrise is Determined by means of a Vertical Circle and the Proof of its Impossibility].

697. HUSAYN AL-TAYBI

Sharaf al-Dīn Ḥusayn ibn Muḥammad ibn `Abdallāh al-Ṭaybī (d. 1342), mathematician.
See: GAL² (II 67), MAMS (II 446); al-Zirikli [1] (II 280), Tuqan [1] (434-435).
M1. Introduction to the Science of Arithmetic (Muqaddimāt fī `ilm al-ḥisāb). Descriptions: Zaki [2] (279), Tuqan [1] (434-435).

698. `IMAD AL-DIN AL-KASHI

`Imād al-Dīn Yaḥyā ibn Aḥmad al-Kāshī (al-Kāshānī) (d. 1340), born in Kashan, worked in Isfahan; judge and mathematician.
See: GAL (II 273-274, 1021), GAL² (II 295-296), IHS (III 698), KZ (I 208, V 301, VI 17), MAMS (II 446-447); Tuqan [1] (436).
M1. Book of Core on Arithmetic (Kitāb al-lubāb fi'l-ḥisāb) - Istanbul (SM AS 2757; Köprülü I 951), Mashhad (5377). Description of the Istanbul manuscripts: SHIM (517). Description of the treatise: Zaki [2] (II 288-289), Tuqan [1] (436). Book contains introduction and 2 chapters: 1) arithmetic and geometry, 2) algebra.
M2. Explanation of Aids on Commenting on Basics of Rules (Iḍā ḥ al-maqāṣid fī sharḥ asās al-qawā`id) - Bukhara (249), Istanbul (BU 4528), Mashhad (Nawwab 29), Rampur (I 409/2). Commentary on the work (No 657, M1) of `Imād al-Dīn al-Baghdādī.
M3. Treatise on Proof of Two Problems, One of which Relates to Measuring the Surface of Sphere, and the Second - to Measuring the Area of Rhomboid (Risāla fī burhān mas'alatayn iḥdāhumā tatawaqqafu `alayhi misāḥat basīṭ al-kura wa'l-thāniya fī taksīr al-shakl al-sha-bīh bi'l-mu`ayyan) - Berlin (oct. 2978/2), Istanbul (Atıf 1714/21). Description of the Istanbul manuscript: SHIM (518).
M4. Treatise on Determining Unknown Numbers (Risāla fī istikhrāj majhūlāt al-`adadiyya) - Mashhad (5298).
M5. Numbers and Magic Squares (A`dād wa awfāq) - Tehran (Zanjānī).

699. NAJM AL-DIN AL-QAHFAZI

Najm al-Dīn Abū'l-Ḥasan `Alī ibn Dāwūd ibn Yaḥyā al-Qaḥfāzī (d. 1343), worked in Damascus; knowledgeable in philology, astrolabes, and calendars.
See: MAA (164), MAMS (II 447); al-Kutubī [1] (II 63).

700. AHMAD AL-JUZJANI

Tāj al-Dīn Aḥmad ibn `Uthmān ibn Ibrāhīm ibn Ibrāhīm ibn Muṣṭafā al-Jūzjānī (Ibn al-Turkumānī) (1282-1343), born in Juzjan, Khurasan, lived in Cairo; grammarian, mathematician, knew law and logic well.
See: IHS (III 700), KZ (I 142, 171, II 180, 297, 569, IV 78, 199, 398, 418, V 424, 454, VI 88, 168)), MAA (164), MAMS (II 447); Ibn Qutlubugha [1] (9).
A1. Commentary on "Book of Introduction to the Science of Astronomy" (Sharḥ Kitāb al-tabṣira fī `ilm al-hay'a) - is mentioned by Ibn Qutlubugha [1] and in KZ (II 180). Commentary on the work(No 435; A2) of al-Kharaqī.

701. `ABDALLAH AL-ANSARI

`Abdallāh ibn Yaḥyā ibn Zakarīya al-Anṣārī (1276-1344), born in Granada, came from Syria; judge and arithmetician.
See: MAA (164), MAMS (II 447); Casiri [1] (II 100).

702. SA`D AL-TUJIBI

Sa`d ibn Abī Ja`far Aḥmad ibn Ibrāhīm ibn Liyūn al-Tujībī (d. 1346), mathematician and naturalist, author of a book on agriculture.

See: IHS (III 827), MAMS (II 447-448).

M1. Elixir of the Art of Measuring Areas (al-Iksīr fī ṣinā`at al-taksīr) - Rabat (2427-2428).

703. MUHAMMAD AL-AKFANI

Abū `Abdallāh Shams al-Dīn Muḥammad ibn Burhān al-Dīn Ibrāhīm ibn Sa`īd al-Sinjārī al-Miṣrī al-Akfānī al-Anṣārī al-Sakhāwī (d. 1348), born in Sinjar, lived and died in Egypt; physician and encyclopaedist.

See: GAL (II 171), GAL² (169-170), IHS (III 899-901), KZ (I 251, III 386, IV 338, V 207, 273, 301, VI 314), MAMS (II 448); Farmer [4] (54).

E1. Direction for the Aspirant for the Most Majestic Aim (Irshād al-qāṣid ilā asnā al-maqāṣid) - Bologna (457), Cairo (VI 180, VII 21, 254, 528, 618), Escorial (II 949), Gotha (163), Istanbul (SM Aşhir I 440), Leipzig (2), Paris (2231/3), Princeton (Yehuda 551, Hout. 491/3), Vienna (2). Description of the Vienna manuscript: Flügel [6] (8-10). Edition: al-Akfānī [2]. English translation by Sprenger: al-Akfānī [1]. German translations of some chapters: Wiedemann [22] (on geometry), [26] (on astronomy), [31] (on arithmetic), [46] (on mineralogy), [72] (on veterinary). Research: Haarbrückner [1], Matviyevskaya [5] (108, 129, 158, 161), [21] (91-94).

Book in 60 chapters: 1-13) language and logic, 14-20) theology and law, 21) dialectic, 22) physics, 23) medicine, 24-25) veterinary and horse-breeding, 26-30) physiognomic, astrology, talismans, magic, and alchemy, 31-32) agriculture and geomancy, 33-34) geometry and architecture, 35-36) optics and burning mirrors, 37-40) mechanics and measuring, 41-43) clepsydras, military devices, and mental instruments, 44-49) astronomy, calendar, timekeeping, astronomical and shadow instruments, 50-56) arithmetic and algebra, 57) music, 58-60) politics, ethics, and homes.

M1. Core of the Science of Arithmetic (al-Lubāb fī `ilm al-ḥisāb) - is mentioned in KZ (V 301).

704. HASAN AL-SIMNANI

Ḥasan ibn Ḥusayn ibn Ḥasan Shāhānshāh (or Ḥasanshāh) al-Simnānī (d. 1348), astronomer, worked in Tabriz.

See: MAA (149), MAMS (II 449, III 369), PL (II 59), SSM (156), STMI (292); Matviyevskaya and Tllashev [6] (122-125).

M1. Treatise on the Arithmetic of Astronomer (Risāla fī ḥisāb al-munajjimīn) - Tashkent (8990/3). Research: Matviyevskaya and Tllashev [6] (122-125). Treatise on sexagesimal fractions.

A1. Explanation of Ilkhanid Zij (Tawḍīḥ-i Zīj-i īlkhānī) P - Cairo (Ṭal`at falak fārisī 13/5 - a fragment), London (Sup. 11636 - a fragment). Commentary in 4 books on Zīj (No 606, A8) of al-Ṭūsī.

A2. verified Sultan Zīj (Zīj muḥaqqaq al-sulṭānī) - Tashkent (3608). This Zīj sometimes is erroneously ascribed to al-Ṭūsī (No 606) or al-Kātibī al-Qazwīnī (No 616).

705. `UMAR AL-FARISI

`Umar ibn Dāūd ibn Sulaymān al-Fārisī (13-14th c.), from Fars, astronomer.

See: GAL (I 346), GAL² (I 509), SSM (60).

A1. Completion of "Memoir" of Naṣīr al-Dīn al-Ṭūsī (Takmilat al-Tadhkira li Naṣīr al-Dīn al-Ṭūsī) - Cairo (falak 7193, Taymūr riyāḍa 128). Completion of the work (No 606, A10), written in 1310 for Abū'l-Fidā (No 680).

706. SADR AL-SHARI`A AL-BUKHARI

'Ubaydallāh ibn Mas`ūd ibn `Umar Tāj al-Sharī`a al-Maḥbūbī (d. 1346), known by the name "Ṣadr al-Sharī`a II al-Bukhārı"; born in Bukhara, worked in Hera; theologian and encyclopaedist; great grandson of theologian Ṣadr al-Sharī`a I.

See: GAL (II 277-279), GAL² (II 300-301), IHS (III 628), KZ (II 281, 315, 443, 601, III 37. IV 48, 393, 439, V 7, 373, 443, 460), MAA (165), MAMS (II 449-450), STMI (512-613); Dallal [6] (ENWC), Qazembek [1].

E1. Adjustment of Sciences (Ta`dīl al-`ulūm) - Berlin (5096, 5683), London (400; Ind. 53), Vienna (7), is quoted in KZ (II 315). Encyclopaedical work containing astronomical chapters.

E2. Commentary on "Adjustment of Sciences" (Sharḥ Ta`dīl al-`ulūm) - London (152, Ind. 532).

E3. (al-Nuqāya - Mukhtaṣar al-Wiqāya). Edition by Qazembek: al-Bukhari [1]. Other editions: al-Bukhari [2]. Research: Qazembek [1]. Abridgement of the work (No 504, E1) of al-Farghānī al-Marghinānī. This book, like the book (No 504, E1), contains astronomical and mathematical chapters on prayer times and building mosques. Commentary on chapters on timekeeping and on determining celestial meridian by means of Indian circle were written by al-Khalkhālī (No 1063, A7) and al-Farā'idī (No 1201, A1).

M1. Algebraic problems (Masāil-i jabriyya) P - Tashkent (9112/11).

M2. Arithmetic (Ḥisāb) - Dushanbe (1455).

M3. Knowledge of Arithmetic in Various Years (Ma`rifat-i ḥisāb dar sālhā-yi gunā-gūn) P - Dushanbe (Ferd. 1096).

M4. Mathematics of Inheritance (Ta`līm-i farāiḍ) P - Dushanbe (2588/5, 3091/1; Publ. 932/1, 2043/1).

A1. Adjustment of Configuration of Celestial Spheres (Ta`dīl hay'at al-aflāk) - astronomical part of E1. Edition with English translation and commentary: Dallal [5]. Research of non-Ptolemaic Lunar model: Dallal [3]. General research: Dallal [5].

A1 continues the tradition of revision of Ptolemaic astronomy in the works (No 606, A10) of al-Ṭūsī and (No 668, A1) of al-Shirāzī.

A2. Calendar (Taqwīm) - Dushanbe (2734).

707. MUHAMMAD AL-DIHLAWI

Muḥammad Ṣadīq ibn Muḥammad Ṣāliḥ al-Iṣfahānī al-Dihlawī (d. 1348), born in Isfahan, worked in Delhi.

See: GAL^2 (I 923-924), MAMS (II 451).

Ph1. Ascent of two Suns in the Science of Optic and Mirrors (Mashriq al-shamsayn dar `ilm-i manāẓir u mirāyā) P - Kazan (pers. 28).

708. HAMDALLAH AL-QAZWINI

Ḥamdallāh ibn Abī Bakr ibn Aḥmad ibn Nasr al-Mustawfī al-Qazwīnī (1280-1349), financial officer in Qazwin, Zanjan, and other cities of Iran; author of historical and cosmographical works.

See: AGL (395-397), KZ (IV 176, V 177, VI 830), MAMS (II 449), PL (I 81-84, II 129-131), PL^2 (327-334); Browne [4] (87-95), Büchner [1] (EI), Piriyev [1], Spuler [1] (EI^2).

G1. Joy of Hearts (Nuzhat al-qulūb) P - Aligarh (Azad. Subh. 2), Berlin (347-352), Calcutta (Buhar 98-99, Curz. 89), Cambridge (Browne Sup. 1306-1309), Dresden (53), Edinburgh (New 7), Hyderabad (riyāḍa 47-48, 150), Kabul (King 26, Matb. 24), Leipzig (201), London (418-420; Ellis M 132), Madras (Firuz Sup. 7), Oxford (406-412), Paris (657-662), Patna (616, 698, 2727/1, 3621, 4379, 9264/3), St. Petersburg (B 393-394, C 600-604, 784/1; Nat. Khan. 110); Univ. 60, 171, 304), Tehran (691; Univ. 258), Vienna (1447). Description of the St. Petersburg manuscripts: Miklukho-Maclay [1] (37-43). Description of Tashkent manuscripts: SVR (I 303-304, V 301, VIII 65-69). Edition: H. al-Qazwīnī [1]. Partial English translations: H. al-Qazwīnī [3-4].

H1. Selected History (Ta'rikh-i guzida) P. English translation: H. al-Qazwīnī [2].

709. MUHAMMAD AL-WABKANWI

Shams al-Dīn Muḥammad ibn `Alī Khwāja Shams al-Munajjim al-Wābkanwī al-Bukhārī (13-14th c.), from Bukhara, astronomer.

See: KZ (III 566), MAMS (II 450-451), PL (II 65), SSM (155); Sayılı [18] (229-231).

A1. Sultan Zij verified by Principles of Ilkhanid Observations (al-Zīj al-muḥaqqaq al-sulṭānī `alā uṣūl al-raṣad al-ilkhānī) - Cairo (mīqāt 1199/2 - chapter on eclipses), Istanbul (SM AS 2694), Madras (Firuz 51), Tehran (184; Univ. 2452/3, Ilah. 190/6), Yazd (`Ulumi 68), is quoted in KZ. Description of the Istanbul manuscript: SHIM (518-519). Research: SIAT; Kennedy [18] (on Uyghur calendar), [36]. Zij is compiled as based on 18 years' observations at the court of Ilkhanid Abū Sa`īd Bahadur Khan (1317-1335).

A2. Book on the Knowledge of Northern Astrolabe (Kitāb-i ma`rifat-i usṭurlāb-i shimālī) P - Istanbul (TK 3327/4). Description of the manuscript: SHIM (519). Book in 2 parts: 1) construction of the astrolabe, 2) use of the astrolabe.

A3. Chapter on the Situation of the Moon (Faṣl fī makth al-qamar) - Cairo (mīqāt 1199/2).

710. AL-SALAHI

al-Ṣalāhī (14th c.), mathematician.

See: GAL (II 274), GAL² (II 296), MAMS (II 451).

M1. Concise [Book] on Measurement (Mukhtaṣar fi'l-misāḥā) - Istanbul (Selim. Kamankash 321; SM Carullah 1506; TK 3133/1), Mashhad (184), Rome (Vat. Barb. 31/1).

711. HAJJI `ABD AL-HAMID DIHLAWI

Ḥajjī `Abd al-Ḥamīd Muḥarrir Ghaznawī Dihlawī (14th c.), born in Ghazna, worked in Delhi; mathematician.

See: STMI (397).

M1. Rules of Minds on the Science of Arithmetic (Dastūr al-albāb fī `ilm al-ḥisāb) P - Rampur (1231). Treatise was written in 1365.

712. MUHAMMAD AL-KALLAI

Shams al-Dīn Muḥammad ibn Sharaf al-Kallāī (14th c.); knew inheritance well.

See: GAL (II 207), GAL² (II 200), SSM (155).

M1. Collection on Inheritance (al-Majmū` fi'l-farāiḍ). Abridgement and commentary on this work: (No 873, M21-M22) of Sibṭ al-Māridīnī.

713. `ABDALLAH TABRIZI

`Abdallāh Falak `Alā-yi Tabrīzī (13-14th c.), from Tabriz, finance officer.

See: MAMS (II 451); Hinz [1] (2).

M1. Book of Happiness (Sa`ādat-nāma) = Treatise of Falak (Risāla-yi Falakiyya) P - Istanbul (SM AS 4190), Tehran (2464/2). Treatise on numerals of "siyaq" figures and book-keeping. Revision of this treatise: (No 752, M1) of al-Mazandarani with the same title.

714. TAJ AL-DIN AL-TABRIZI

Tāj al-Dīn Abu'l-Ḥasan `Alī ibn Abī Muḥammad `Abdallāh ibn al-Ḥasan ibn Abī Bakr al-Tabrīzī (13-14th c.), from Tabriz, teacher at the Tarantay madrasa in Cairo.

See: SSM (60).

MA1. Book of Delight of `Alā' al-Dīn (Kitāb al-nuzha al-`Alā'iyya) - Cairo (Ṭal`at riyāḍa 104). Treatise in 4 parts: 1) arithmetic, 2) geometry, 3) astronomy, 4) astrology.

715. SHAMS AL-DIN AL-MIZZI

Shams al-Dīn Abū `Abdallāh Muḥammad ibn Aḥmad ibn `Abd al-Raḥīm al-Mizzī al-Ḥanafī (1291-1349), studied in Cairo, worked in Damascus, was muadhdhin in a mosque; constructor of astrolabes and quadrants. One of his quadrants is kept at Lomonosov Museum in St. Petersburg, see Dorn [5] (18) and Maystrov [1] (42, table 67).

See: GAL (II 155-156), GAL² (II 156), IHS (III 696-697), KZ (I 323, III 388, V 207, VI 309), MAA (165), MAA³ (173), MAMS (II 453-454), SSM (63-64), STMI (294); Fehervary [1].

A1. Treatise on the Astrolabe (al-Risāla al-asṭurlābiyya) - London (977/1), Oxford (I 967/12), Paris (2547/6).

A2. Selected for Minds on Operations with the Astrolabe (Nakhab al-albāb fi'l-`amal bi'l-asṭurlāb) = Treatise on Operations with the Astrolabe (Risāla fi'l-`amal bi'l-asṭurlāb)- Cairo (falak 3993/1, mīqāt 594 (ascribed to al-Jazulī (No 737) Damascus (10163 - an anonymous fragment). Treatise in 10 chapters.

A3. Disclosure of Doubts on Operations with the Sine [Quadrant] (Kashf al-rayb fi'l-`amal bi'l-jayb) - Cairo (mīqāt 113, 116, Fāḍil mīqāt 154, 187/2, 195/2, Ṭal`at mīqāt 79/1, Taymūr riyāḍa 139/5), Hyderabad (riyāḍa 12), Istanbul (SM AS 4812/63; TK 3482/6, 3483/18), Leiden (991/1), Leipzig (833/5), London (Sup. 764/4), Mashhad (5603; Nawwab 22), Milan (278c), Paris (2547/13), Princeton (Hout. 245), Tashkent (6230/2), is quoted in KZ (III 388, V 207). Various manuscripts contain 24, 43, 67, and 95 chapters.

A4. Threading Selected Pearls in Operations with the Sine Quadrant (Naẓm al-lu'lu' al-muhadhdhab fi'l-`amal bi'l-rub` al-mujayyab) - Cairo (Taymūr majlis 367/1), Rabat 452/5, 454). Poem on sine quadrant in 25 chapters.

A5. Gardens in Full Bloom with Operations of the Almucantar Quadrant (al-Rauḍāt al-muzhirāt fi'l-`amal bi rub` al-muqanṭarāt) - Algiers (1457/3), Berlin (5839), Cairo (mīqāt 75, 620/4a, 763-765, 771/1, 827/1, 1169/5, Fāḍil mīqāt 102, 127, 218, Taymur maj. 391/2), Cambridge (Sup. 725), Leiden (1001/9), Oxford (I 967/6, 1023/7), Paris (2547/14), Princeton (Yehuda 4350, 4462), Rome (Vat. Sbath 861/2). Treatise in 35 chapters.

A6. Treatise on Operations with the Winged Instrument (Risāla fi'l-`amal bi'l-āla al-mujannaha) = Book on Winged Quadrant (Kitāb fī rub` al-mujannah) - Cairo (mīqāt 771/6 - an anonymous fragment, 1093/11, Ṭal'at mīqāt 78), Escorial (II 961/5), Paris (2547/23), Rampur (I 434/32), St. Petersburg (Nat. Firk. Hebr. 1913 - by Hebrew letters). Description of the Escorial manuscript: Derenbourg [7] (99). Treatise in 40 chapters.

A7. Treatise on Operations with the Fold Quadrant (Risāla fi'l-`amal bi'l-rub` al-maṭwī) = Treatise on Operations with Quadrant of Circle on Which There Are Fold Almucantars (Risāla fi'l-`amal bi rub` al-dā'ira al-mawḍū` `alayhi al-muqanṭarāt al-maṭwiyya) - Cairo (mīqāt 138/2), Oxford (I 967/7).

A8. Treatise on Operations with the Hidden Quadrant (Risāla fi'l-`amal bi'l-rub` al-musattar) - Manchester (361).

A9. Concise [Book] on Operations with the Quadrant of Circle (Mukhtaṣar fi'l-`amal bi rub` al-dā'ira) - Leiden (1001/19).

A10. Tables of Prayer Times (Jadāwil mīqātiyya) - Cairo (Fāḍil mīqāt 62). Tables for latitude 33°27' of Damascus.

A11. Operations with Almucantars (al-Ashkāl al-shāhiyya fi'l-`amal bi'l-muqanṭarāt) - is mentioned in KZ (I 323).

A12. Treatise on Indian Circle (Risāla fi'l-dā'ira al-hindiyya) - Cairo (Taymur maj. 391/4).

A13. [Treatise on Almucantar Quadrant] - is mentioned in A6. Treatise in 35 chapters.

716. `ALA' AL-DIN IBN AL-TURKUMANI

`Alā al-Dīn Abu'l-Ḥasan `Alī ibn `Uthmān ibn Ibrāhīm ibn Muṣṭafā al-Māridīnī (1284-1349), known by the name "Ibn al-Turkumānī" (son of a Turkmen), brother of al-Juzjani (No 700); judge, arithmetician, also knew law and inheritance well.

See: IHS (III 700), KZ (II 71, 371, 402, 648, 655, IV 119, 136, 244, 249, 331, V 422, 465, VI 164, 486), MAA (165), MAMS (II 452); Ibn Qutlubugha [1] (32).

717. SHIHAB AL-DIN AL-`UMARI

Shihāb al-Dīn ibn Faḍlallāh ibn Aḥmad al-`Umarī al-Qurashī al-Shāfi`ī (1301-1349) born in Damascus, descendant of orthodox Caliph `Umar (634-644) (hence the name "al-`Umari"); scholar-encyclopaedist, studied in Damascus, Cairo, and Alexandria, was judge in Cairo and later succeded his father as chancellor to the Mamluk government in Cairo and Damascus.

See: IHS (III 802-804), MAA (166-167), MAMS (II 457-458); al-Kutubī [1] (I 9).

G1. Book of Voyages of the Eyes on Provinces and Countries (Kitāb masālik al-abṣār fī mamālik al-amṣār) - Istanbul (SM 1917, 2227, AS 3418, 3422-3429, 3432, 3437, 343, Fatih 3761, Laleli 2037; TK 2301, 2797/1-5, 12, 14-15, Revan Köşk 1668), London (Sup. 9589), Mashhad (4401), Oxford (I 900), Paris (2327). Editions: al-`Umarī [2] (only vol. 1), [3] (all volumes).
Work in 27 volumes: 1-4) geography, 5-6) scientists of Islam, 7-8) philologists, 9) philosophers and physicians, 10) musicians, 11) viziers, 12-13) secretaries and orators, 14-19) poets, 20-22) animals, plants, and minerals, 23) religions and sects, 24) dynasties, 25-27) history. Geographical books contain descriptions of empires of Western Africa and the world map (No 32, G1) of al-Ma'mūn.

H1. Education for Notable Improvement [of Correspondence] (al-Ta`rīf bi'l-muṣṭalaḥ al-sharīf). Edition: al-`Umari [1]. A chancellery manual for diplomats.

718. JAMAL AL-DIN AL-SUGHDI AL-TURKISTANI

Jamāl al-Dīn Sa`īd ibn Muḥammad ibn Muṣaddiq al-Sughdī al-Turkistānī (first half of 14th c.), from Transoxania (ancient Sogdiana = Sughd, later Turkestan), mathematician.

See: GAL (II 272-273), MAMS (II 452), STMI (485).

M1. Treatise for `Alā' al-Dīn (al-`Alāiyya) - Uppsala (321). Arithmetic treatise written in 1312.

Ph1. Insight on the Science of Optic in Philosophy (al-Baṣa'ir fī `ilm al-manāzir fil-ḥikma) - Hyderabad (Salar (hay'a 3).

719. MUHAMMAD AL-AMULI

Muḥammad ibn Maḥmud al-Amulī (d. 1352), worked in Sultaniyya near Tabriz under Ilkhanid ruler Uljaytu (1304-1317), philosopher, commentator on Ibn Sīnā (No 317).

See: GAL² (I 824), KZ (IV 500), MAMS (II 452-453), PL (II 355-357), STMI (606-607).

E1. Jewels of Sciences in Holy Sources (Nafā'is al-funūn fī `arā'is al-`uyūn) P - Ashqabad (4/31), Berlin (80-87, 94-95, 147-148, 164-167, 332), Calcutta (651, 1360-1362; Buhar 219, 221; Madrasa 141), Cambridge (Sup. 1320; Eton 80), Dushanbe (157/1), Edinburgh (330), Hyderabad (falsafa 102, 128, 345, kim. 4, mutaf. 120; Salar `ulum 2-9), London (Sup. 16827; Ind. 2221-2224), Madras (Firuz 44), Mahachqala (30), Manchester (Lind. 147, 369), Mashhad (120, 122, 2217, 4415, 5011-5016), Oxford (435, 1483-1491), Paris (725, 2351-2352), Patna (907-909), St. Petersburg (A 1532, C 690, 1403, D 152, E 11; Nat. ANS 61, 81/2), Tashkent (2798; Univ. 32). Tehran (785), Vienna (25).
Description of the Paris manuscript: Blochet [2] (294-295). Description of the first Tashkent manuscript: SVR (III 414). Description of the Vienna manuscript: Flügel [6] (38-42). Edition: al-Amuli [1]. Russian translation of introduction to chapter on music by Rajabov: al-Amuli [2].

720. `ALI IBN AL-GHARBI

Jalāl al-Dīn `Alī ibn al-Gharbī (14th c.), mathematician.

See: MAMS (II 453).

M1. Special Miracles in Commenting "Treatise for `Alā' al-Dīn" (al-Mu`jizāt al-najība fī sharḥ al-risāla al-`Alā'iyya) - Istanbul (TK 3117). Description of the manuscript: Sayyid [1] (86). Commentary on arithmetic work (No 718, M1) of al-Ṣughdi al-Turkistānī.

721. YOSEF IBN WAQAR

Yosef ben Yitzḥaq ben Moshe ibn Weqar (14th c.), Spanish Jew, astronomer and physician, worked in Toledo at the court of Alfonso XI and in Granada; he wrote in Hebrew and Arabic.

See: Avneri [1] (EJ), Seligsohn [2] (JE).

A1. Zij (al-Zīj) - Escorial (870). Research: Castels [2]. The Zīj was written in Arabic in 1357 and translated by the author himself into Hebrew in 1395-1396.

722. ABU MUQRI` `ABD AL-HAQQ AL-BATTIWI

Abū Muqri` Abū Muḥammad `Abd al-Ḥaqq ibn `Alī al-Baṭṭiwī al-Warzīzī al-Mujmilī al-Marjūsī al-Sūsī (14th c.) from Battiwa in Rif, Morocco; timekeeper and military man; commanded troops of Marinid Sultan Abu'l-Hasan `Ali (1331-1348) in Algeria (1331-1332).

See: GAL (II 331), GAL² (II 364), IHS (III 695), MAA³ [1] (178-179), MAMS (II 454), SSM (137); Colin and Renaud [1].

A1. Poem (Rajaz) - Escorial (II 361/37, 889/5, 954/14), Hamburg (113/5), Kaduna (470, 775/2). Edition with French translation of the fragment on Lunar stations by Motylinski: Abū Muqri` [1]. Poem on calendar, astronomy, and astrology. In the Kaduna manuscript the author is called "sheikh Abū Muqri` al-Yaḥṣubī".

723. HAMZA AL-BAYHAQI

Ḥamza ibn `Alī Sa`d al-Bayhaqī (14th c.), from Bayhaq near Marw, mathematician; copied the London manuscript of the work (No 606, A1) of al-Ṭūsī at Sultaniyya in 1322.

See: GAL² (II 1020), MAMS (III 30), SSM (155-156).

M1. Treatise on Arithmetic Complemented to [Treatise] (Risāla fi'l-ḥisāb mulḥaqa bi'l-Shamsiyya) - Cairo (riyāḍa 823/2). Complement to the treatise (No 686, M1) of al-Naysabūrī.

M2. Treatise on Knowledge of Questions and Uses in Arithmetic (Risāla fī ta`rīf su'l wa fawāid fi'l-ḥisāb) - Rampur (I 33).

M3. Treatise on Proof of Problems (Risāla fī bayān masā'il) - Ashqabad (2537/4).

724. YAHYA IBN HAZIL

Abū Zakariyā Yaḥyā ibn Aḥmad ibn Hāzil (d. 1353), from Granada, poet, philosopher, astronomer, physician, and jurist.

See: MAA (166), MAMS (II 454); Casiri [1] (I 117).

725. ABU BAKR AL-KARAKI

Zayn al-Dīn Abū Bakr ibn Muḥammad ibn Ayyūb al-Tamīmī al-Ṣūfī al-Karakī (14th c.), from Karak East of the Dead Sea, Palestine, astronomer, pupil of al-Mizzī (No 715), was timekeeper in Jerusalem.

See: GAL² (II 156), IHS (III 697), SSM (64).

726. TAQI AL-DIN AL-SUBKI

Taqī al-Dīn `Alī ibn `Abd al-Kāfī al-Subkī (d. 1355), Ottoman mathematician and astronomer.

See: GAL (II 106-107), GAL ² (II 102-104), SSM (61).

M1. Removal of Anxiety on Inheritance of Non-Muslims (Kashf al-ghumma fī mīrāth ahl al-dhimma) - Cairo (`ulūm 23317/1). Treatise in 15 chapters on the inheritance laws of Christians and Jews.

A1. Indications on Establishing Crescent (al-Adilla fī ithbāt al-ahilla) - Jerusalem (Khalid. 71/1).

A2. Explanation of Indications on Establishing the Crescent (Bayān al-Adilla fī ithbāt al-ahilla) - Jerusalem (Khalid. 71/2).

A3. Unfurled Flag on Determination of Months (al-`Alam al-manshūr fī ithbāt al-shuhūr) - Cairo (fiqh 1414).

727. AHMAD AL-BAKHANIQI

Shihāb al-Dīn Aḥmad ibn Muḥammad ibn Abī `Umar al-Ḥanafī al-Azharī al-Bakhāniqī (or al-Bajāniqī) ibn al-Mu`inī (d. 1355), astronomer, worked in Egypt and Yemen.

See: GAL² (II 158, 1019), IHS (III 1524), MAMS (II 454-455), MAY (34-35), SSM (61).

A1. [Treatise on Astronomy and Astrology] - Berlin (5860/1). Description of the manuscript: Ahlwardt [1] (264). Treatise in 44 chapters. Description of chapters on measuring heights and depths: Wiedemann [36] (60).

A2. On Operations with the Almucantar Quadrant (Dhikr al-`amal bi rub` al-muqanṭarāt) - Berlin (5860/2). Description of the manuscript: Ahlwardt [1] (265). Treatise in 30 chapters.

A3. On Operations with the Table of Arcs (Dhikr al-`amal bi'l-qisiyy al-jadwaliyya) - Berlin (5860/3). Description of the manuscript: Ahlwardt [1] (265). Treatise in 6 chapters.

A4. On Operations with the Sine Quadrant (Dhikr al-`amal bi'l-rub` al-mujayyab) - Berlin (5860/4). Description of the manuscript: Ahlwardt [1] (216). Treatise in 30 chapters.

A5. Treatise on Operations with the Sufficient Quadrant (Risāla fi'l-`amal bi'l-rub` al-mughnī) - Manchester (361).

A6. Completion of the Construction of the Astrolabe (Tatmīm `amal al-asṭurlāb) - Dublin (Beatty 4090). Treatise was written for Abu Ja`far `Umar, vizier of Rasulid Sultan of Yemen al-Mujāhid `Alī ibn Dawūd (1321-1363).

A7. Liberated Word on the Construction of the Hidden Quadrant (al-Lafẓ al-muḥarrar fi a`māl al-rub` al-musattar) - Princeton (Yehuda 373).

A8. Book on Turn, its Surplus, and Azimuth (Kitāb al-dā'ir wa faḍlihi wa'l-samt) - Cairo (mīqāt 45/3, 53, 108, 616, 690, 739, 786, Fāḍil mīqāt 33/2). Collection of tables for timekeeping for the latitude of Cairo.

A9. Table for Determining the Surplus of Turn for `Asr for the beginning of Zodiacal Signs (Jadwal ma`rifat faḍl al-dā'ir li'l-`aṣr li ru'ūs al-burūj) - Cairo (Fāḍil mīqāt 33/2). Table for determining the time of prayer `asr for the beginning of Solar months.

728. KHALIL AL-JUNDI

Khalīl ibn Isḥāq al-Jundī (14th c.), imam from Egypt; knew inheritance well.

See: GAL (II 101-103), GAL² (II 96-99), SSM (61).

M1. Concise Book (al-Mukhtaṣar). Commentary by al-Qalaṣādī on the chapter on inheritance: (No 865, M16).

729. MUHAMMAD IBN RIDWAN

Abū Yaḥyā Muḥammad ibn Riḍwān ibn Arqam (d. 1356), astronomer, naturalist, and historian, author of a treatise on the genealogy of Arab tribes and kins, and a treatise on horses dedicated to Nasrid ruler of Granada Muḥammad III (1306-1307). MAMS erroneously believed that he died in 1533.

See: IHS (III 630), KZ (III 366).

A1. Treatise on the Astrolabe and Its Construction (Risālat al-asṭurlāb wa `amalihī) - is mentioned in KZ.

A2. Poem on the Science of Stars (Manẓūm fī `ilm al-nujūm) - is mentioned in IHS.

730. MANSUR AL-ZUWAWI

Manṣūr ibn `Abdallāh al-Zuwāwī (d. 1356), from the Berber tribe Zuwawa, worked in Granada; knowledgeable in rhetoric, philosophy, and arithmetic.

See: MAA (166), MAMS (II 455); Casiri [1] (II 96).

731. `ALI IBN AL-DURAYHIM

Tāj al-Dīn `Alī ibn Muḥammad ibn al-Durayhim al-Tha`labī al-Shāfi`ī al-Mawṣilī (1312-1360), from Mosul, theologian and naturalist, author of works in physics and zoology, taught in Damascus and Aleppo; was ambassador of Mamluk Sultan al-Naṣīr X in Ethiopia.

See: GAL (II 165), GAL[2] (II 213), HMA (II 277), IHS (III 1638-1639), KZ (I 155, 318, 384, 462, 506, 517, II 53, 149, 273, 300, 424-425, 485, III 570, 594, 610, IV 297, 304, V 62, 249, VI 30, 293, 341, 370), MAA[3] (115-116), MAMS (II 455).

Ph1. Information of the Observer on Mirrors and Optics (Naba' al-nāẓir fī'l-marāyā wa'l-manāẓir) - is mentioned in KZ. Research: Wiedemann [23] (401).

732. SHIHAB AL-DIN IBN AL-SARRAJ AL-HAMAWI

Shihāb al-Dīn Aḥmad ibn Abī Bakr `Alī ibn al-Sarrāj al-Ḥamāwī (d. 1362) from Hama, Syria; Ottoman mathematician and astronomer, worked under Ottoman Sultan Bayezid (1389-1402).

See: GAL (II 155), GAL[2] (II 156, 327), MAA (199-200), MAMS (II 539-540), SSM (60-61).

M1. Geometric Problems (Masāil handasiyya) - Cairo (riyāḍa 694, Fāḍil riyad 41/27). Treatise contains 9 problems.

A1. Treatise on the Hidden Astrolabe and Hidden Sine Quadrant (Risālat al-asṭurlāb al-ghā'ib wa'l-jayb al-ghā'ib) - Berlin (5799/1, Manchester (361 h)

A2. Treatise on Operations with the Almucantar Quadrant (Risāla al-`amal bi rub` al-muqanṭarāt) - Berlin (5869).

A3. Treatise on Operations with the Hidden Quadrant (Risāla al-`amal bi rub` al-musattar) - Rampur (I 47).

A4. Rare Pearls on Operations with the Circle for Finding Sines (al-Durr al-gharīb fī'l-`amal bi dā'irat al-tajyīb) - Leiden (187b/4).

A5. Treatise on the Winged Quadrant for Finding the Sine of an Arc and Arc of a Sine (Risāla fī'l-rub` al-mujannaḥ fī ma`rifat jayb al-qaws wa qaws al-jayb) - Cairo (mīqāt 64/5, 138/7, Istanbul (SM AS 1719).

A6. Treatise on the Instrument of Ibn al-Sarrāj on Determining Operations on Horizons (Risālat al-'āla al-Sarrājiyya fī istikhrāj al-a`māl al-'āfāqiyya) - Cairo (mīqāt 291/1). A copy describing this instrument is at Benaki museum, Athens. Research: King [47]. Treatise on the universal astrolabe invented by the author that is valid for all horizons.

A7. Treatise on Operations with the Quadrant (Risāla fī'l-`amal bi rub`) - Cairo (mīqāt 138/8 - anonymous).

A8. Smart Treatise on Operations with the "Chest of Goose" (Risāla laṭīfa fī'l-`amal bi ṣadr al-awizza) - Cairo (Ṭal`at mīqāt 242/10). Treatise on an astronomical instrument.

Me1. [Treatise on Operations with Balance for Change Gold] - Cairo (Fāḍil riyāḍa 30/6).

733. MUHAMMAD IBN SUDAT

Abū'l-Qasim Muḥammad ibn `Alī ibn Sudat (d. ca 1370), from Almeria; mathematician, also knowledgeable in medicine and poetry.

See: MAA (166), MAMS (II 456); Casiri [1] (II 88).

734. MUHAMMAD IBN AL-HAJJAJ

Abū `Amr Muḥammad ibn `Abdallāh ibn Ibrāhīm ibn al-Ḥajjāj (14th c.), from Granada, was judge in Almeria and ambassador in Egypt and Tunisia; poet and mathematician, also knew medicine well.
See: MAA (166), MAMS (II 456); Casiri [1] (II 91).

735. MUHAMMAD IBN AL-KATTANI AL-ALATI

Muḥammad ibn Muḥammad ibn `Abd al-Qawī al-Qurashī, Egyptian; known by the names "ibn al-Kattānī" and "al-Ālātī" (14th c.); maker of instruments (al-ālātī) and reckoner.
See: MAA (166), MAMS (II 456), SSM (63).
A1. Table of Solar Altitude (Jadwal irtifā` al-shams) - Cairo (Fāḍil mīqāt 72). Table was written in 1346.

736. AHMAD SHIRAZI

Naṣīr al-Dīn Aḥmad ibn Ḥaydar Shīrāzī (14th c.), from Shiraz, astronomer, son of Ḥaydar al-Shīrāzī (No 658).
See: MAMS (II 456), PL (II 63-64), SSM (154).
A1. Guide on Stars (Hidāyat al-nujūm) P - London (Sup. 13548/3), probably revision of the work (No 653, A1) of Abū'l-`Uqūl with the same title as that of his father.
A2. Abridgement of "Indication" (Mukhtaṣar-i Irshād) P - Cairo (Ṭal`at majlis 912/3), Istanbul (SM Fatih 5400/3), Shiraz (Shahchirag 208/3).
Abridgement of the work (No 658, A2) of his father on the astrolabe in 50 chapters.
Ph1. Selected from Optics (Intikhāb min al-manāẓir) - Hyderabad (Salar tibb 109/3).

737. SHAMS AL-DIN AL-JAZULI

Shams al-Dīn Muḥammad al-Jazūlī (14th c.), Moroccan astronomer from the Berber tribe Jazūla.
See: GAL (II 255, 331-332), GAL² (II 364), IHS (III 695), KZ (III 388), MAA (166), MAMS (II 456-457), SSM (63).
A1. Treatise on the Octant of Circle (Risāla fī thumn al-dā'ira) = Treatise on Operations with Octant of Circle (Risāla fi'l-`amal bi thumn al-dā'ira) = Treatise on the Sine Octant (Risāla jayb al-thumn) - Berlin (5838), Cairo (mīqāt 120/2, 138/3, 170/2, Fāḍil mīqāt 91/1, Ṭal`at mīqāt 79/3 - incomplete).
Description of the Berlin manuscript: Ahlwardt [1] (252). Description of Cairo manuscripts: Kunitzsch [1] (45-46).
Treatise in 14 chapters, written ab. 1345.
A2. Treatise on Operations with the Sufficient Astrolabe (Risāla fi'l-`amal bi'l-asṭurlāb al-mughnī) - Berlin (5799/2), Princeton (Yehuda 373).
A3. Treatise on Astrolabe Known as "Ten Sections" (Risāla fi'l-asṭurlāb al-ma`rūfa bi'l-`ashrat fuṣūl) - Cairo (mīqāt 594).
This treatise is also attributed to al-Mizzī (No 715).
A4. Treatise on Operations with the [Quadrant with] Absent Sine (Risāla fi'l-`amal bi'l-jayb al-ghā'ib) - Berlin (5837), Cairo (Zaki 786/7), Manchester (360/1), Paris (2519/11).
Description of the Berlin manuscript: Ahlwardt [1] (252). Research: Murray [1], Schmalzl [1] (108-110).
Treatise was written in 1344.
A5. Treatise on the Hidden Quadrant (Risāla fī rub` al-musattar) = Treatise on Properties of Operations with the Quadrant Called "Hidden" (Risāla fī kayfiyyat al-`amal bi'l-rub` al-mansūb li'l-musattar) - Cairo (Fāḍil mīqāt 118), Princeton (Yehuda 373, after A2).
A6. Treatise on the Sine Quadrant (Risāla al-rub` al-mujayyab) - Vienna (1507/1)
A7. Treatise on Description of Operations with the Sine Quadrant (Risāla fī ṣifat al-`amal bi'l-rub` al-mujayyab) - Cairo (mīqāt 443).
Treatise in 10 chapters.
A8. Section on Construction of Plane Oblique [Sundial] by Geometry (Faṣl fī `amal basīṭa munḥarifa bi'l-handasa) - Cairo (mīqāt 600/4).

738. KAMAL AL-DIN AL-TURKUMANI

Kamal al-Dīn al-Turkumānī (14th c.), Turkmen astronomer, worked in the capital of Golden Horde Saray under Khan Jani-Beg Mahmud (1349-1357).

See: KZ (VI 113), MAA (222), MAMS (II 457, III 369).

A1. Commentary on "Compendium" of al-Jaghmini (Sharḥ Mulakhkhaṣ al-Jaghmīnī) - London (1342/2), Mashhad (Nawwab 20), Princeton (9974; Yehuda 1350), is quoted in KZ.

Research: Atagharryyev and Halimov [1], Atagharryyev [2, 4-6, 8] (general research), [5] (mathematical geography), [7] (application of stereographical projection for determining the azimuth of Qibla).

Treatise was written in 1354.

739. `ABDALLAH AL-YAFI`I

Sheikh Abū Muḥammad `Afīf al-Dīn `Abdallāh ibn As`ad ibn `Alī al-Yāfi`ī (1298-1367), born in Aden, Yemen, lived in Mecca and Medina; theologian and astronomer.

See: GAL (II 226-228), GAL² (II 227-228), MAY (35-36), SSM (132-133), STMI (358-359).

A1. Lamp of Unity of Beauty Light (Sirāj al-tawḥīd al-bāhij al-nūr) - Cairo (Ṭal`at majlis 179/1, Taymūr riyāḍa 322). Treatise on folk astronomy.

A2. Poem on Byzantine months (Manẓūma fī'l-shuhūr al-rūmiyya) = Poem of Sheikh `Abdallah Yāfi`i (Qaṣīda li Sheikh `Abdallāh al-Yāfi`ī) - Cairo (maj. 709/23, 319/6, 705/7, mīqāt 949/1), Hyderabad (riyāḍa 363), Leiden (Landberg-Brill 445), London (Sup. 773/3), Princeton (Yehuda 4224),

740. MUHAMMAD IBN SHAKIR AL-KUTUBI

Ṣalāḥ (Fakhr) al-Dīn Abū `Abdallāh Muḥammad ibn Shākir ibn Aḥmad ibn `Abd al-Raḥmān al-Dārāmī al-Dimashqī al-Kutubī (d. 1363), from Damascus; historian.

See: GAL² (II 48), IHS (III 1781), MAMS (II 457); Plessner [1] (E I).

HS1. (Fawāt al-wafayāt) - Escorial (II 1779). Edition: al-Kutubī [1]. Research: Antuña [1]. Supplement to KWA: (No 625, HS1) of Ibn Khallikān.

741. ABU BAKR AL-HAMILI

Sirāj al-Dīn Abū Bakr ibn `Alī ibn Mūsā al-Hāmilī (d. 1364), Yemeni jurist and mathematician.

See: GAL (II 236), GAL² (II 240), KZ (II 24, V 454, VI 197), MAA (111), MAMS (II 468), MAY (55).

M1. Pupils' Guide to the Knowledge of Arithmetic (Ma`ūna al-ṭullāb fī ma`rifa al-ḥisāb) - Berlin (5977), is mentioned in KZ. Description of the manuscript: Ahlwardt [1] (334-335). Commentary on the work (No 411, M1) of al-Ṣardafī written in 1324.

742. MURTAFA` AL-SA`ATI

Abū'l-Ma`ālī Muḥyi al-Dīn Murtafa` ibn Ḥasan ibn Murtafa` al-Sā`ātī (14th c.), (al-sā`ātī = clock-maker); Egyptian astronomer.

See: KZ (I 346, II 1496). MAMS (III 26), SSM (64). -

A1. Explanation of Astonishing in the Hidden Astrolabe in the Science of Timekeeping (Iẓhār al-`ajā'ib min al-asṭurlāb al-ghā'ib fī `ilm al-mīqāt) - Cairo (Fāḍil mīqāt 11, 43/4 - an anonymous fragment, Ṭal`at mīqāt 242/3 - anonymous; Azhar VI 292), Hyderabad (riyāḍa 361), Princeton (Yehuda 2666), is mentioned in KZ (I 346). Treatise in 30 chapters.

A2. Discovery of the Hidden with Operations with the Sine Quadrant (Kashf al-mughayyab fī'l-`amal bi'l-rub` al-mujayyab) - is mentioned in KZ (II 1496) as a treatise in 50 chapters.

743. MUHAMMAD AL-RASHIDI

Shams al-Dīn Abū `Abdallāh Muḥammad ibn Burhān al-Dīn Ibrāhīm al-Rashīdī (14th c.), Egyptian astronomer.

See: SSM (65).

A1. Supporting the Trustworthy Man and Imam on the Knowledge of Times of Prayers in the Forbidden City (`Umdat al-mu'tamm wa'l-imām fī ma`rifat awqāt al-ṣalawāt bi'l-balad al-ḥarām) - Cairo (lughāt 89/4). Treatise in 8 chapters plus introduction and prayer tables for the latitude 21° of Mecca.

A2. [Hour-angle Tables] - Cairo (mīqāt 45, 5, 153/3 - two fragments). Tables for the latitude 32° of Jerusalem.

744. `ABD AL-`AZIZ IBN `ABD AL-`AZIZ

`Izz al-Dīn `Abd al-`Azīz ibn Sa`d al-Dīn ibn `Abd al-`Aziz (14th c.), born in Seville, worked in Cairo and Damascus, judge and astronomer.

See: MAMS (II 324), SSM (66).

A1. Sufficient Treatise on Operations with the Sine [Quadrant] (Risāla kāfiyya fi'l-`amal bi'l-jayb) - Escorial (II 918/14). Description of the manuscript: Derenbourg [7] (23-25). Treatise in 4 books: 1) eras, 2) determining time by day, 3) determining time by night, 4) necessary from geometry, arithmetic, and sines. It was written in Cairo in 1393.

745. MUHAMMAD AL-ABILI

Abū `Abdallāh Muḥammad ibn Ibrāhīm al-Ābilī (1282-1356), born in Tlemcen, studied in Tlemcen and Marrakish, was pupil of Ibn al-Bannā (No 696), traveled to Mecca; mathematician also knowledgeable in logic, law and philosophy. He was Ibn Khaldūn's teacher (No 771).

See: MAA (167-168), MAMS (II 458).

746. `ABD AL-RAHMAN AL-FASI

Abū Zayd `Abd al-Raḥmān ibn Abī'l-Rabī` al-Lijā'ī al-Fāsī (d. 1371), from Fas, constructor of astrolabes; teacher of al-Qusantīnī (No 780); mathematician, astronomer.

See: MAMS (II 458); Tuqan [1] (437).

A1. Tables of the Zīj of Zacuto (Jadāwil Zīj Zaqūṭū) - Cairo (mīqāt 1081/5). Revision of the work of (No 923, A1) of Zacuto.

A2. Treatise of Commentary on Tables of the Zīj of Zacuto (Risāla fī sharḥ jadāwil Zīj Zaqūṭū) - Cairo (mīqāt 1081/3). Commentary on A1.

747. `ABD AL-`AZIZ AL-HUWARI

`Abd al-`Azīz ibn `Alī ibn Dāwūd al-Huwārī (14th c.), Moroccan mathematician from the Berber tribe Huwara, pupil of Ibn al-Bannā (No 696).

See: IHS [1] (III 694), KZ (II 400), MAA (168), MAA³ (173), MAMS (II 458), SSM (139).

M1. Purpose for Scribes on Arithmetic Operations (Ghāyat al-kuttāb (al-lubāb) fī a`māl al-ḥisāb) - Cairo (falak 6829/1), Escorial (II 948/2, 953), Istanbul (SM Laleli 2780), London (Ind. 770/3), Oxford (I 217/3), is quoted in KZ. Description of the Escorial manuscripts: Derenbourg [7] (79, 84-85). Commentary on the treatise (No 696, M1) of Ibn al-Bannā, was written in 1360.

748. `ATA AL-SAMARKANDI

Abū Muḥammad `Aṭā ibn Aḥmad ibn Muḥammad Khwāja Ghāzī al-Samarkandī (14th c.), born in Sangufin near Samarkand, worked at the court of Genghisid Radna, the Mongol viceroy of Tibet.

See: GAL² (II 297), IHS (III 1529-1531), MAMS (II 458-459); Abdullayev and Hikmatullayev [1] (44), Pingree [64] (EIr).

A1. Zij (Zīj) - Paris (6040), was written in 1362 for Chinese prince Chen Si Wu Tsin from the Mongol dynasty Yuen. Publication and research of two tables, of parallax and visibility of the crescent: Kennedy and Hogendijk [1], general research: Franke [1].

42 tables of Spherical, Solar, Lunar, Planetary and Stellar Astronomy with the Chinese names of stars.

749. FAKHR AL-DIN AL-BIHISHTI

Fakhr al-Dīn Abū'l-`Alā Muḥammad ibn Aḥmad al-Bihishtī Isfarāinī al-Khurāsānī (14th c.), from Khurasan, jurist and mathematician.

See: GAL (II 273), GAL[2] (II 294-295), MAMS (II 459).

M1. Treatise on the Explanation of Rules of Arithmetic (Risāla fī bayān qawānīn al-ḥisāb) - Ashqabad (2537).

M2. What is necessary for the Muslim Jurist from Arithmetic (Mā lā budda li'l-faqīh min al-ḥisāb) - Jakarta (Sup. 610), London (1346/2).

M3. Treatise on Reckoning of Algebra and Almucabala (al-Risāla fī ḥisāb al-jabr wa'l-muqābala) - Dushanbe (IZA 202/6), Istanbul (TK 7024), Mashhad (4293, 5289-5290), Tehran (2785/12; Sipahsalar 1276). Treatise was written in 1348.

M4. Uses of al-Khurasānī (al-Fawāid al-Khurāsāniyya) = Commentary on "Inheritance" of Sirāj al-Dīn (Sharḥ Farāiḍ Sirājiyya) - London (Ind. 246-248), Tashkent (8507/8). Commentary on the work (No 527, M8) of al-Sajawandī.

M5. Treatise on Arithmetic (Risāla dar ḥisāb) P - Mashhad (62).

M6. Treatise on Finding unknown [Quantities] by the Method of Algebra and Almucabala (Risāla dar istikhrāj-i majhūlāt az ṭarīq-i jabr u muqābala) P - Mashhad (Univ. 315/3).

M7. Science of Inheritance (ʿIlm-i farāiḍ) P - Bukhara (252),

M8. Treatise Enveloping Arithmetic and Algebra and Almucabala (Risāla mushtamala ʿalā'l-ḥisāb wa'l-jabr wa'l-muqābala) - Hyderabad (Salar riyāḍa 14).

M9. Commentary on "Inheritance" of Siraj al-Dīn (Sharḥ al-Farāiḍ al-sirājiyya) - Kabul (Maʿarif fārisī 23). Commentary on the work (No 527, M8).

750. ʿALAʾ AL-DIN IBN AL-SHATIR

ʿAlā al-Dīn Abū'l-Ḥasan ʿAlī ibn Ibrāhīm ibn Muḥammad al-Mutʿim al-Anṣārī al-Falakī al-Dimashqī (1306-1375), known by the name "Ibn al-Shāṭir"; timekeeper of the Umayyad mosque in Damascus; for his astronomical observations in Syria see KZ (III 470).

See: GAL (II 156), GAL[2] (II 157), IHS (III 1524-1526), KZ (I 321, II 228, III 401, 467, 470, 488, 494, 557-558, 566, VI 370, 401), MAA (168-169), MAA[2] (177), MAMS (II 459-463), SSM (61-63); Janin and King [1], Kennedy and Ghanem [1], al-Khalidi [1], King [7] (DSB), [75] (ENWC), Nevskaya [1], Rosińka [1], Saliba [18], Sayılı [18] (246), Tuqan [1] (438), Wiedemann [90].

Memorial collection: "Ibn al-Shāṭir" [1]. On the astronomical instrument ṣundūq al-yawāqit - "box of Sapphires" invented by Ibn al-Shāṭir: Janin and King [1].

A1. Concise [Treatise] on Sine (al-Mukhtaṣara fī'l-jayb) - Damascus (150), Leiden (188/2).

A2. Treatise on Sine (Risāla jayb) - Damascus (150). Treatise in 10 chapters plus introduction.

A3. Zij (Zīj) = New Zij (al-Zīj al-jadīd) - Cairo (falak fārisī 13/2 - a fragment, huruf 76/5 - tables of Muslim feasts and coordinates of cities, mīqāt 64/6 - star catalogue, 73/4 - a fragment, 940/2, Fāḍil mīqāt fārisī 5/2 - a fragment, Ṭalʿat majlis 811/4 - a fragment, falak fārisī 13/2, mīqāt 73/4), Damascus (3093), Leiden (65, 530), Milan (E 440), Oxford (I 876, II 278), Paris (2522, 2541/5 - a fragment), Princeton (973; Yehuda 145), St. Petersburg (C 723), Tripoli (Um. 1182), is quoted in KZ (III 557-558). German translation of the introduction: Wiedemann [90] (321-324). Research: SIAT (125); Schirmer [1].

A4. Limit of Desire in Correcting Principles (Nihāya al-su'l fī taṣḥīh al-uṣūl) - Cairo (Taymūr riyāḍa 154 - incomplete), Leiden (194), Oxford (I 920/2, 934, 938, 979), Tehran (Senat 7572/7), is quoted in KZ (VI 401). Research: Abbud [1], Hartner [20], Kennedy and Roberts [1], Nevskaya [1], Roberts [1] (movement of the Sun), [2-3] (motions of planets). New theory of movement of the Sun, the Moon, and the planets, based on the combination of several epicycles. For the Moon, this theory coincides with the theory of Copernicus.

A5. Treatise on the Astrolabe (Risāla al-asṭurlāb) = Treatise on Operations with the Astrolabe (Risāla fī'l-ʿamal bi'l-asṭurlāb) - Berlin (IGMN II 4), Damascus (9236), London (407/1, 408/5), Rabat (2495-2496), Tripoli (T 25/15), Tunis (Nat. 17905). Description of the Berlin manuscript: Ruska and Hartner [1] (174-175). Treatise in 10 chapters.

A6. Treatise on Principles of the Science on the Astrolabe (Risāla fī uṣūl ʿilm al-asṭurlāb) - Cairo (falak 18359, mīqāt 479; Azhar VI 398). Treatise in 10 chapters.

A7. Information to Friends on what is Necessary from the Science of the Astrolabe (Takhbīr al-aḥbāb fī'l-ḍarūrī min ʿilm al-asṭurlāb) - Tunis (Nat. 18070).

A8. Treatise on Names of lines Drawn on the Instrument Called Northern Astrolabe with Tympanums (Risāla fī asmā' al-rusūm al-marsūma ʿalā al-'āla al-musammāt bi'l-asṭurlāb al-shimālī dhāt al-ṣafā'iḥ) - Berlin (5810), London (Sup. 765/3), Paris (2542/3), Princeton (Yehuda 1066, 2888, 3792, 4086; the last three Princeton manuscripts are anonymous). Description of the Princeton manuscripts and their comparison with Berlin,

London, and Paris manuscripts: Mach [1] (423). Research: Wiedemann [36] (59). Treatise on the construction and use of the astrolabe in 15 chapters plus introduction.

A9. Gardens in Full Bloom on Operations with the Almucantar Quadrant (al-Rawḍāt al-ẓāhirāt fi'l-`amal bi rub` al-muqanṭarāt) - Milan (27), is quoted in KZ (III 494).

A10. Indications [on Astrolabe, Almucantar, and Sine Quadrant] (al-Ishārāt) - Cairo (mīqāt 476 - chapter I only, Fāḍil mīqāt 144/1), London (Sup. 9599). Treatise in 3 chapters.

A11. Concise [Treatise] on Operations with the Astrolabe, Almucantar Quadrant, and Sine Quadrant (Mukhtaṣar fi'l-`amal bi'l-asṭurlāb wa rub` al-muqanṭarāt wa'l-rub` al-mujayyab) - Jerusalem (Yehuda 158/10), London (977/2), Rabat (2497).

A12. Treatise on Explanation of the Hidden in Operations with the Sine Quadrant (Risāla īḍā ḥ al-mughayyab fi'l-`amal bi'l-rub` al-mujayyab) = Opening of Hidden in Reckoning with the Sine Quadrant (Kashf al-mughayyab fi'l-ḥisāb bi'l-rub` al-mujayyab) - Bursa (Haraççıoğlu hay'a 12), Cairo (mīqāt 64/1, 1212, Ṭal`at mīqāt 79/6 - a fragment).

A13. Opening of the Hidden in Reckoning with the Sine Quadrant (Kashf al-mughayyab fi'l-ḥisāb bi'l-rub` al-mujayyab) - Cairo (mīqāt 64/2). Treatise in 54 chapters, not coinciding with A12.

A14. Common Good on Operations with the Perfect Quadrant for Islamic Timekeeping (al-Naf` al-`āmm fi `amal bi'l-rub` al-tāmm li mawāqīt al-Islām) = Treatise on the Perfect Quadrant for Islamic timekeeping (Risāla fi'l-rub` al-tāmm li mawāqīt al-Islām) - Berlin (5816), Cairo (mīqāt 138/12, 1101/3 - only the 93rd problem). Description of the Cairo manuscript: Kunitzsch [1] (58). Treatise in 200 chapters, contains 100 problems.

A15. Treatise on Operations with the Perfect Quadrant (Risāla fi'l-`amal bi'l-rub` al-tāmm) = Treatise on the Sine Quadrant (Risālat al-rub` al-mujayyab) - Berlin (5815), Cairo (Kavala mīqāt 3/2), Leiden (139/1), Rome (Vat. 318/6). Description of the Berlin manuscript: Ahlwardt [1] (243). Research: Wiedemann and Frank [5]. Author's abridgement of A14 in 46 chapters.

A16. Treatise on the Astrolabe and the Perfect Quadrant (Risāla fi'l-asṭurlāb wa'l-rub` al-tāmm) - Baku (B 34/7).

A17. Treatise on the Perfect Quadrant (Risālat al-rub` al-kāmil) - Princeton (Yehuda 373). Description of the manuscript: Mach [1] (423). Treatise in 12 chapters, not coinciding with A14 and A15 with similar titles.

A18. Concise Treatise on Operations with Perfect Quadrant (Risāla mukhtaṣara fi'l-`amal bi'-l-rub` al-tāmm) - Cairo (Kavala mīqāt 2/2).

A19. Delight of the Listener on Operation with the Universal Quadrant (Nuzhat al-sāmi` fi'l-`amal bi'l-rub` al-jāmi`) - Bursa (Haraççıoğlu hay`a 12), Cairo (mīqāt 64/3, 138/11, 199), Damascus (3098).

KZ (II 228) describes this treatise under a title where the word "Delight" is replaced by "Gift" (Tuḥfa), perhaps this treatise is confused with A28. Treatise in 41 chapters. Description of the manuscripts: Kunitzsch [1] (103-105).

A20. Rays of Light on Operations with the Universal Instrument (al-Ashi``a al-lāmi`a fi'l-`amal bi'l-āla al-jāmi`a) - Aleppo (760), Cairo (Taymūr riyāḍa 169/1), Princeton (Yehuda 317, 373), St. Petersburg (B 1029/1). Research: Nevskaya [1]. Treatise in 60 chapters. KZ (I 371) writes that this instrument was invented by Ibn al-Shāṭir himself.

A21. Bright Lightning on Operations with the Universal Quadrant (al-Barq al-lāmi` fi'l-`amal bi'l-rub` al-jāmi`) - Cairo (mīqāt 17 - anonymous). Authorship was established by King in SSM, treatise on the same instrument, as A20.

A22. Treatise on Operations with the Crescent Quadrant (Risāla fi'l-`amal bi'l-rub` al-hilālī) - Damascus (3098).

A23. Table for Northern Latitude 34° for Determining the Limit and Middle of Arc of Perigeum (Jadwal li `arḍ 34° shimāl fi ma`rifat al-ghāya wa niṣf al-qaws al-ḥaḍīḍ) - Leiden (1001/13).

A24. Poem on Stars (Urjūza fi'l-kawākib) - Leiden (1021/2).

A25. Treatise on Determining Dates (Risāla fi istikhrāj al-ta'rīkh) - Cambridge (Palm. 28/1).

A26. Treatise on New Astronomy (Risāla fi'l-hay'a al-jadīda) - Jerusalem (Khalid. 66/5).

A27. Basic Indications for Timekeeping According to Shari`at (al-Ishārāt al-`imādiyya fi'l-mawāqīt al-shar`iyya) - Cairo (mīqāt 476, 926/1, Fāḍil mīqāt 144/1), London (Sup. 9599), Princeton (Yehuda 1168). Description of the Princeton manuscript: Mach [1] (423). Treatise in 3 chapters: 1) astrolabe, 2) almucantar quadrant, 3) sine quadrant; London and last Cairo manuscripts contain chapter I only.

A28. Gift to Hearing on what Relates to Zodiacal Signs and Ascensions (Tuḥfat al-sāmi` fi mā yata`allaqu bi'l-burūj wa'l-ṭawāli`) - St. Petersburg (Nat. 129/2).

A29. Treatise on Quadrant of `Alā' al-Dīn (Risāla fi'l-rub` al-`Alā'ī) - Oxford (1030/1).

A30. Treatise on Operations with the Square [Instrument] (Risāla fi'l-`amal bi'l-murabba`a) - Aleppo (Wakuf. 923/2), Cairo (mīqāt 138/5), Damascus (3098 - anonymous). Ibn al-`Attar in (No 813, A1) mentions this instrument and informs that it was invented by Ibn al-Shāṭir himself.

A31. Treatise on Operations with Quadrant Shikkaziyya (Risāla fi'l-`amal bi rub` al-shikkāziyya) - Aleppo (Wakuf 920/2).

A32. Treatise on Reasoning of Ibn al-Shāṭir on Arrows (Risāla fi qawl Ibn al-Shāṭir fi bāb al-sihām) - Cairo (V 272).

A33. Sparkling Steel on Operations with the Sine [Quadrant] without the Index (al-Zand al-murī fi'l-`amal bi'l-jayb bi ghayr murī) = Complement to Seeing Operations with the Sine [Quadrant] without Index (al-Mazīd al-murī fi'l-`amal bi'l-jayb bi ghayr murī) - Escorial (I 970/8), Princeton (Yehuda 373 - under the first title), the second title is mentioned in A14. Treatise in 21 chapters.

A34. Treatise on Operations with Minutes of Difference of Visible Horizons (Risāla fi'l-`amal bi daqāiq ikhtilāf al-āfāq al-mar'iyya)- Cairo (Fāḍil mīqāt 155/2 - a fragment, Taymur mīqāt 303/2).

A35. [Commentary on "Almagest"] - is mentioned in KZ (III 476).

751. SARIJA AL-MALATI AL-MARIDINI

Zayn al-Dīn Sarīja ibn Muḥammad al-Malaṭī al-Māridīnī (d. 1386), lived in Malatya and Mardin (Southern Turkey); scholar, grammarian, arithmetician, also knowledgeable in law, theology, history, philosophy, medicine and inheritance.

See: KZ (I 171, 188, 288, 241, 349, 375, 378, 406, 443, 448, 501, II 56, 183, 211, 250, 254, 383, 393, 436, 443, 580, 632, III 70, 80, 107, 164, 218, 230, 473, 587, 597, 605, IV 68, 79, 94, 196, 247, 390, 432, 515, V 327, 344, 382, 526, 606, 650, VI 110, 153, 183, 203, 300, 344, 352, 370, 395, 436), MAMS (II 463-464).

M1. Means of Reckoners in the Art of Arithmetic (Bidāwat al-ḥussāb fi ṣinā`a al-ḥisāb) - is mentioned in KZ (II 56).

M2. Collection on Inheritance (Jāmi` al-farāiḍ) - is mentioned in KZ (II 580).

M3. Friend of the Practicing in Inheritance (Ilf al-rāiḍ fi'l-farāiḍ) - is mentioned in KZ (I 406).

A1. Bites of Falcon for Punishment of al-Razi (`Aḍā ḍ al-bāzī fi'l-qaṣāṣ al-Rāzī) - is mentioned in KZ (III 597). Critique of the work (No 535, A1) of Fakhr al-Dīn al-Rāzī.

752. `ABDALLAH AL-MAZANDARANI

`Abdallāh ibn Muḥammad ibn Kiyā al-Māzandarānī (14-15th c.), from Mazandaran, finance officer.

See: MAMS (464); Hinz [1].

M1. Celestial Treatise (Risāla-yi falakiyya) P - Istanbul (SM AS 2756). Edition with German translation by Hinz: al-Mazandarani [1]. Research: Hinz [1], Validi Togan [1]. Revision of the work (No 713, M1) of al-Tabrīzī with the same title.

753. MUBARAK-SHAH

Mubārak-shah (14th c.), knowledgeable in logic and many other sciences; worked in Egypt and Iran; was one of the teachers of al-Jurjani (No 788).

See: MAMS (II 464), PL (I 36), PL^2 (203); Farmer [4] (58).

A1. Commentary on "Compendium" (Sharḥ al-Mulakhkhaṣ) - Istanbul (SM Fatih 3511). Commentary on the work (No 547, A1) of al-Jaghmīnī.

Mu1. Commentary on "Book of Cycles" (Sharḥ Kitāb al-adwār) - London (2361). French translation: d'Erlanger [1] (III 184-566). Commentary on the work (No 641, Mu1) of al-Urmawī.

754. MUHAMMAD AL-HASIB

Abu `Abdallāh Muḥammad ibn al-Ḥusayn al-Ḥāsib, (14th c.) (al-ḥāsib = reckoner), mathematician, worked in Seville.

See: MAA (168-169), MAMS (II 464), SSM (51-52); Casiri [1] (I 352).

M1. [Treatise on Measures of Length] - Cairo (riyāḍa 42/2). Arithmetic treatise.

A1. On the Science of Shadows (Fī `ilm al-aẓlāl) - Escorial (913/7). Treatise on gnomonics.

755. ABU YUSUF AHMAD

Abū Yūsuf Aḥmad ibn al-Hasan or al-Ḥasan ibn Yūsuf (14th c.), mathematician (his two names are written in the beginning and on title folio of the same Cairo manuscript).
See: GAL² (II 1019), MAA (202), MAMS (III 16), SSM (52).
M1. Book on Algebra and Almucabala (Kitāb fi'l-jabr wa'l-muqābala - Cairo (riyāḍa 100).

756. NIZAM AL-DIN AL-BAZDAWI

Niẓām al-Dīn al-Bazdawī (14th c.), astronomer.
See: MAMS (III 37).
A1. Explanation of "Memoir" (Tawḍīḥ al-Tadhkira) - Istanbul (SM AS 2646). Commentary on the work (No 606, A10) of al-Ṭūsī.

757. AL-ZUBAYR AL-THAQAFI

Abu'l-Qāsim al-Zubayr ibn Aḥmad ibn Ibrāhīm ibn al-Zubayr al-Thaqafī (d. 1388) son of Aḥmad ibn Zubayr (see Pellat [5a], EI²), judge in Granada; astronomer.
See: GAL (II 344), GAL² (II 1025), MAA (201), MAMS (II 465), SSM (138).
A1. Memoir for Having Minds on the Implementation of Operations with the Astrolabe (Tadhkirat dhawī al-albāb fī istīfā' al-`amal bi'l-asṭurlāb) - Algiers (1466), Berlin (IGMN II 33), Cairo (falak 8535/1, mīqāt 173/2. Description of the Berlin manuscript: Ruska and Hartner [1] (192-193). Treatise in 140 chapters and 3 parts: 1) kinds of astrolabe, 2) construction of the astrolabe, 3) use of the astrolabe.

758. AHMAD AL-FARADI

Aḥmad ibn Mūsā ibn `Alī al-Jallād al-Faraḍī (1300-1390), Yemeni mathematician.
See: MAY (55-56).
M1. Pearl Introduction in Opening the Art of Algebra (al-Muqaddima al-durriyya fī istinbāṭ al-ṣinā`a al-jabriyya) - Hyderabad (Osm. 520).

759. `ALI AL-FARADI

`Alī ibn Aḥmad ibn Mūsā ibn `Alī al-Jallād al-Faraḍī (b. 1331), Yemeni mathematician, son of Ahmad al-Faraḍī (No 758).
See: MAY (55-56).
M1. Core of Cores on Methods of Arithmetic (Lubb al-lubāb fī ṭarāiq al-ḥisāb) - Milan (A 271). Treatise on arithmetic of inheritance.

760. ABU BAKR AL-YAMANI

Abū Bakr ibn Abī'l-Ma`ālī al-Yamanī (14th c.), Yemeni astronomer.
See: GAL² (II 253), MAMS (II 465), MAY (38), SSM (133).
A1. Mathematical Introduction to Durable Construction and Problems of the Calendar (Madkhal al-ta`līm fī inshā' al-ta`siyya wa amr al-taqwīm) - Cairo (mīqāt 1015), Manchester (361/A). Treatise was written in 1395.

761. AL-TIBUGHA AL-BAKLIMISHI

`Alā al-Dīn al-Ṭībughā al-Dawārdār al-Baklimishī al-Yunānī (d. 1394), from Greece (al-yunānī), astronomer.
See: GAL (II 135, 168), GAL² (167), IHS (III 1533), KZ (III 401), MAMS (II 465), SSM (68), TIFI (171-172).
A1. Treatise on Almucantars on the Line of [Terrestrial] Equator (Risāla fī muqanṭarāt khaṭṭ al-istiwā') - Princeton (Yehuda 373).
A2. Treatise on Quadrant [of the Astrolabe] Shakāziyya (Risāla fī rub` al-shakāziyya) - Cairo (mīqāt 774) - is mentioned in KZ.

Mc1. Guide for for Pupils in the Science of Arrow Shooting (Ghāyat al-ṭullāb fī funūn al-ramy bi'l-nushāb) - Tunis (Nat. 18631).

762. AHMAD AL-SHADHILI

Aḥmad ibn `Umar al-Shādhilī (14-15th c.), Egyptian astronomer.

See: KZ (III 407), MAMS (III 15), SSM (68).

A1. Treatise on Operations with Quadrant [of the Astrolabe] Shikkaziya (Risāla fi'l-`amal bi rub' al-Shakāziyya) - Cairo (mīqāt 988), Oxford (93). Treatise in 14 chapters.

A2. Treatise on [the Astrolabe] Zarqala-Shakāziya (Risālat al-zarqālī al-shakāzī) - is mentioned in KZ. Treatise in 14 chapters.

763. `ALI IBN TIBUGHA

`Alā al-Dīn Abū'l-Ḥasan `Alī ibn Ṭībughā (14-15th c.), timekeeper at the Umayyad Mosque in Damascus.

See: SSM (68).

A1. Limit Demanded on Operations with the Horizontal Sine Quadrant (Ghāyat al-maṭlab fi'l-`amal bi'l-rub` al-āfāqī al-mujayyab) - Cairo (mīqāt 832/1, Fāḍil mīqāt 176/2 - anonymous), Paris (2519/5 - anonymous). Treatise in 3 parts, 60+60+15 chapters.

A2. [Treatise on Operations with the Almucantar Quadrant] - Cairo (mīqāt 832/2).

A3. [Treatise on Operations with the Quadrant of Astrolabe Shakāziyya] - Cairo (mīqāt 64/4). Research: Samsó and Catala [1] (this treatise is ascribed to Ibn al-Majdī, No 815).

764. SHAMS AL-DIN AL-KHALILI

Shams al-Dīn Abū `Abdallāh Muḥammad ibn Muḥammad al-Khalīlī (14-15th c.), worked in Damascus as mu'adhdhin of Umayyad Mosque and timekeeper of the Mosque of Sayf al-Dawla.

See: GAL (II 156-157), GAL2 (II 157), IHS (III 1226-1227), MAA (169), MAMS (II 465-466), SSM (64-65); King [3], [15] (DSB), [72].

A1. Table of Horizons (al-Jadwal al-āfāqī) - Berlin (5755), Cairo (mīqāt 758, Fāḍil mīqāt 43/1, 98/2, Ṭal`at mīqāt 228/1 - a fragment), Paris (2558). Treatise in 8 chapters plus introduction. Research: King [3].

A2. Book on Turn and Surplus of Turn, and Azimuth from Latitude [One] Degree to Latitude Fifty Degrees (Kitāb al-dā'ir wa faḍl al-dāir wa'l-samt min `arḍ daraja ilā `arḍ khamsīna daraja) - Escorial (II 931/8).

Description of the manuscript: Derenbourg [7] (207). Research: King [3, 8], Van Brummelen [1]. Book in 5 chapters.

A3. Table of Turn and its Surplus for the Latitude of Damascus (Jadwal al-dā'ir wa faḍlihī li `arḍ Dimashq) - Cairo (Fāḍil mīqāt 71/1, Ṭal`at mīqāt 81/2).

A4. Table of Surplus of Turn for the Latitude of Damascus (Jadwal faḍl al-dā'ir li `arḍ Dimashq) - Cairo (falak 8525/3, Ṭal`at mīqāt 228/5).

A5. [Tables for Determining the Zenith and Azimuth of Qibla] - Berlin (5754-5754a). Research: King [8].

A6. Tables of Turn, Its Surplus, and Azimuth [of Qibla] (Jadāwil al-dā'ir wa faḍlihī wa'l-samt) - Cairo (Fāḍil mīqāt 71/1).

A7. [Astronomical Tables and Surveys] - Berlin (5756).

A8. Table of Surplus of Turn and Operations [of Timekeeping] by Day and Night (Jadwal faḍl al-dā'ir wa `amal al-layl wa'l-nahār) - Cairo (falak 8525/3a, Ṭal`at mīqāt 81/2), Mosul (129), Paris (2558). Table for latitude 33°30' of Damascus for 1408.

A9. Table of Operations [of Timekeeping] by Day and Night for the Latitude of Damascus (Jadwal `amal al-layl wa'l-nahār li `arḍ Dimashq) - Cairo (falak 8525/1, Ṭal`at mīqāt 218, 255/7 - incomplete).

A10. Treatise on Operations with a Square (Risāla fi'l-`amal bi'l-murabba`) - Manchester (361/T).

A11. Notable Stars on Operations with the Sine [Quadrant] without Index and Circle (al-Nujūm al-ẓāhira fī `amal al-jayb bi ghayr murī' wa lā dā'ira) - Cairo (falak 4045, Fāḍil mīqāt 201/3) - is quoted in KZ (VI 310). Treatise in 25 chapters.

A12. Useful on Line of Shadow on the Place of Adhan of the Bride Minara of Umayyad mosque in Damascus (Fā'ida fī khaṭṭ al-ẓill alladhī fī maḥall al-ādhān fī ma'dhanat al-`arus bi'l-jāmi` al-Umawī bi Dimashq) - Cairo

(Taymūr riyāḍa 161/2). Treatise on the sundial at the main minara at the Umayad mosque in Damascus, as described by Janin [1].

765. SHAMS-I SIRAJ `AFIF

`Abd al-`Aziz Bahā-yi Nūrī "Shams-i Sirāj `Afīf" (1342 - ca 1400), Indian historian under Delhi Sultan Firuz-Shah III Tughluq (1351-1388), author of "History of Firuz- Shah".
See: STMI (275)
E1. Indications of Firuz-Shah (Dalā'il-i Firuz-Shāh) = Translation of Varahamihira (Tarjama-yi Barāhī) P - Aligarh (Azad. Habib 44/10), Hyderabad (jadid 119), London (Ind. 1997). Persian translation and revision of encyclopaedical work of Indian scholar of 5[th] c. Varahamihira containing chapters on mathematics, astronomy, geography, and mineralogy.

766. `ALI AL-QOMANATI

`Ali al-Qomanatī (d. 1397), Turkish astronomer, born in Qomanat (now Gümenek) near Tokat (Turkey), worked in Edirne at the court of Ottoman Sultan Yıldırım Bayezid I (1389-1402).
See: KZ (III 565), MAMS (II 466).
A1. Commentary on "Comprehensive Zīj" (Sharḥ al-Zīj al-shāmil) - is mentioned in KZ. Commentary on the work (No 256, A2) of Abū'l-Wafā', dedicated to Sultan Bayezid.

767. TAQI AL-DIN ABU TAHIR

Taqi al-Dīn Abū Ṭāhir (14[th] c.), Egyptian astronomer and constructor of astrolabes.
See: SSM (68); Mayer [1].
A1. Useful Concise Treatise on Operations with the Quadrant [of Astrolabe] Shakāziya (Risāla wajīza mufīda fī'l-`amal bi rub` al-shakāziyya) - Cairo (Taymūr riyāḍa 169/2). Jerusalem (Dar al-Qutayna), Manchester (361/4). In MAA this treatise is attributed to Taqiy al-Dīn al-Rāṣid (No 1004).

768. MUHAMMAD AL-MAWSILI

Shams al-Dīn Abū `Abdallāh Muḥammad ibn Aḥmad al-Mawṣilī (14[th] c.), from Mosul, mathematician.
See: GAL[2] (II 1022), MAA[2] (181), MAMS (III 29).
M1. Poem [on Finger Reckoning] (Qaṣīda) - Paris (Sup. 1912). French translation: Marre [2].
M2. Arithmetic of [Finger] Joints of Two Hands (Ḥisāb `uqad) al-yadayn) - Tehran (Senat 2672/3).

769. `ALI AL-`UDHRI AL-BAGHDADI

Nūr al-Dīn Abū'l-Baqā' `Alī ibn `Uthmān ibn Muḥammad ibn al-Qāṣiḥ al-`Udhrī al-Baghdādī (1316-1399), from Baghdad, theologian and astronomer.
See: GAL (I 521, II 214), GAL[2] (I 726, II 212), MAA (169), MAMS (II 466-467), SSM (67), TIFI (100).
A1. Gift to Pupils on Operations with the Quadrant of Astrolabe (Tuḥfat al-ṭullāb fī'l-`amal bi rub` al-asṭurlāb) - Berlin (5808; IGMN II. 34), Cairo (mīqāt 26/1), Princeton (Garr. 1024). Description of the Cairo and Berlin manuscripts: Ruska and Hartner [1] (193-194). 90 chapters.
A2. Pearl of Thoughts in the Knowledge of Times by Night and Day (Durrat al-afkār fī ma`rifat awqāt al-layl wa'l-nahār) - London (Sup. 764/5).
A3. Explanation of Operations with the Sine Quadrant (al-Manhal al-`adhb al-mustatab fī sharḥ al-`amal bi'l-rub` al-mujayyab) - Rome (Vat. 317/4).

770. AHMAD AL-HARIRI

Aḥmad al-Ḥarīrī (d. ca 1400), Egyptian astronomer and constructor of sundials.
See: SSM ((66). The list of sundials he made in 1383: Mayer [1] (35).
A1. [Tables of Planetary Equations for Jupiter] - Cairo (mīqāt 909/8), Paris (2496).

771. `ABD AL-RAHMAN IBN KHALDUN

Abu Zayd `Abd al-Raḥmān ibn Muḥammad ibn Khaldūn al-Tūnisī al-Ḥaḍramī al-Ishbilī al-Mālikī (1332-1406), born in Tunis, came from the Southern Arab tribe of Kinda. The family lived in Seville for some centuries; famous historian, philosopher, pedagogue, and physician; one of the founders of sociology and philosophy of history; worked in Tunis, Fas, Granada, Bougia, Tlemcen, Cairo; he was the ambassador of the king of Granada to Petrus the Cruel in Seville. He died in Cairo.

See: AGL (431-438), GAL (II 314-317), HMA (II 288-289), IHS (III 1767-1779), KZ (II 101, 115, 168, 584, 656, III 35, 50, 70, 89, 93-94, 169, 350, IV 183, VI 71, 557), MAA (169-170), MAMS (II 467); Adnan [6] (IA), Arendonk [4] (EI), Batsiyeva [1-6], Bel [2] (EI), [3] (IA), Ye. Belyayev [2], de Boer [4] (177-184), Butterworth 'I (ENWC), Farmer [4] (57-58), Ignatenko [1, 4], Mahdi [1, 4], Martin [3] (GAC), Nassar [1], Pines [21], Rosenthal [10] (DSB), Schacht [5] (EI²), Singer [2] (LM).

H1. Instructive Examples and Collections of Origins and Information Concerning the History of Arabs, Ajams, and Berbers and their Contemporaries having Higher Power (Kitāb al-`ibar wa dīwān al-mubtada' wa'l-khabar fi ayyām al-`arab wa'l-`ajam wa'l-barbar wa man `āṣarahum min dhawī'l-sulṭān al-akbar); the term "Ajams" was used for Persians and Spaniards. Complete edition: Ibn Khaldūn [2]. Partial edition: Ibn Khaldūn [3].

H2. Introduction (Muqaddima) of H1. Edition: Ibn Khaldūn [4]. French translation by Quatremère: Ibn Khaldūn [1], English translation by Rosenthal: Ibn Khaldūn [8]. Partial translations: German by Schimmel - Ibn Khaldūn [5], English by Issawi - Ibn Khaldūn [6], French by Muflil - Ibn Khaldūn [10]. Other French: Woepcke [14], Turkish by Ugan - Ibn Khaldūn [7], Russian by Batsiyeva - Ibn Khaldūn [9], Czech by Hrbek - Ibn Khaldūn [11]. Research: Batsiyeva [1-6], Dalila [1], Ignatenko [2-3, 5], Matviyevskaya [21] (94-95), Renaud [8].

H2 contains the chapter on development of mathematical sciences - arithmetic, both theoretical and practical, geometry, algebra, optics, and astronomy.

772. SA`D AL-DIN AL-TAFTAZANI

Sa`d al-Dīn Mas`ūd ibn `Umar al-Taftāzānī (1322-1390), born in Taftazan near Nasa, Khurasan (now Ashqabad, Turkmenistan); worked in Herat, Gijduwan near Bukhara; the court of Khan Jani-Beg (1331-1357) at the Golden Horde Saray; in Shiraz at the court of Shah-Shujā` al-Muḥammad (1357-1384); and in Samarkand at the court of Timur (1370-1405). Famous theologian and author of works on logic and mathematics.

See: GAL (II 278-280), GAL² (II 301-304), IHS (III 1462-1464), KZ (I 90, 94, 138, 216, 234, 253, 295, II 12-13, 329, 339, 401, 404, 444, 479, 638, III 100, 369, 424, IV 31, 76, 208, 210, 219, 356, 401, V 187, 203, 223, 585, 606, VI 16, 18, 27, 48, 172, 385, 600, 630), MAMS (II 467-468); Abdullayev and Hikmatullayev [1] (44-47), Storey [1] (EI), [5] (IA),

M1. Commentary on " Sharḥ al-Shamsiyya" (Sharḥ al-risāla al-Shamsiyya) - Tashkent (4100/1, 4117/4, 9080). Commentary on the work (No 686, M1) of al-Naysaburi.

M2. Treatise on Angles of a Triangle (Risāla fi zawāyā al-muthallath) - Ashqabad (2891, 3065), Tashkent (2422/6, 4697/30, 6175/4, 8820/5). Anonymous commentary: St. Petersburg (B 2094/9, 2164). Description of the first Tashkent manuscript: SVR (I 221). Research: Atagarryyev and Halimov [2], Nursultanov [2]. Chapter of M1.

PH1. Commentary on "Catechism" of al-Nasafi (Sharḥ al-`Aqā'id al-nasafiyya). There are many manuscripts. Commentary on the treatise (No 437, PH1) of al-Nasafī.

PH2. Teaching Logic and Kalam (Tahdhīb al-manṭiq wa'l-kalām). Edition: al-Taftazānī [1].

773. ISMA`IL AL-NAJRANI

Ismā`īl ibn `Aṭiyya al-Najrānī (d. 1392), Yemeni astronomer.

See: MAY (39-40).

A1. Zij of al-Najrani (Zīj al-Najrānī) - Damascus (3092 - planetary tables), Milan (C 86 - a fragment).

774. `ABDALLAH AL-TUJIBI

`Abdallāh ibn Muḥammad ibn Sa`d al-Tujībī (14th c.), grandson of al-Tujībī (No 702); astronomer.

See: GAL² (I 402), MAA (86), MAMS (II 469), SSM (137-138).

A1. Treatise on the Astrolabe (Risāla fi'l-asṭurlāb) - Berlin (5805), London (407/5). Description of the Berlin manuscript: Ahlwardt [1] (236-237). German translation of chapter on determining distances to non-available objects: Wiedemann [36] (70-72). Book in 25 chapters, abridgement of the book (No 312, A2) of al-Ghāfiqī.

A2. Treatise on Tympanum [of Astrolabe] Shakāziyya (Risāla fi'l-ṣafīḥa al-shakāziyya) - Cairo (Taymūr riyāḍa 159/1), Jerusalem (Khalid.).

775. JAMAL AL-DIN AL-MARIDINI

Jamāl al-Dīn `Abdallāh ibn Khalīl ibn Yūsuf al-Māridīnī (d. 1406), born in Mardin (Southern Turkey); was muadhdhin at the Umayyad Mosque in Damascus.

See: GAL (II 218), GAL² (II 218), IHS (III 1530-1533), KZ (I 306, II 218, 236, 253, IV 156, 399, 432, 496, 511, V 205, 211, 332, 345, 407), MAA (170), MAA² (177), MAA³ (173-174), MAMS (II 469-470), SSM (66-67), STMI (276); Farmer [4] (58), King [78] (ENWC), Plessner [3] (EI), Plessner and Samsó [1] (EI²).

A1. Treatise on Operations with Tables Called "Lattices" (Risāla fi'l-`amal bi'l-jadāwil al-musammiyya bi'l-shabaka) = Lattice (Shabaka) - Cairo (falak 4026/1), Paris (2525). Edition of introduction, English translation, and research: King [6] (231-240).

A2. Spilled Pearls on Operations with the Protractor Quadrant (al-Durr (al-Lu'lu') al-manthūr fi'l-`amal bi rub` al-dastūr) - Berlin (5840), Cairo (mīqāt 174/2, 181/6, 497/2, Fāḍil mīqāt 167/1), Cambridge (Palm. 31/18), Escorial (II 931/7), Hyderabad (riyāḍa 187; Osm. 1351), Leiden (2812), Oxford (I 967/8, 1042/1), Paris (2519/2), Rabat (451/3), Turin (64/13). Description of the Berlin manuscript: Ahlwardt [1] (253-254). English translation of the introduction: Worrell and Rufus [1]. Description of the chapters 57-59 on determining distances to non-available objects: Wiedemann [36] (76-78). Treatise in 60 chapters.

A3. Three Last Chapters of Treatise [Consisting] of Sixty [Chapters] (al-Thalāthat al-abwāb min ākhir al-risāla al-sittīniyya) - Princeton (Yehuda 3442). Chapters 58-60 of the work A2.

A4. Folios (Treatise) on Operations with the Quadrant of Circle Almucantars are Drawn (Waraqāt (Risāla) fi'l-`amal bi rub` al-dā'ira al-mawḍū ` fīhī (alladhī `alayhi) al-muqanṭa-rāt) - Berlin (5841-5842), Cairo (falak 3769/4, 4061, 4290, 4298/1, mīqāt 292, 620/10, 771/5, Fāḍil mīqāt 177. 3, 245/1), Escorial (II 970/1), Gotha (1497), Leiden (1001/2), Tripoli (Um. 1123/2). Description of the Berlin manuscripts: Ahlwardt [1] (254-256). Research: Wiedemann and Frank [5].

A5. Treatise on Operations with the Sine Quadrant (Risāla fi'l-`amal bi'l-rub` al-mujayyab) = Collection of what is Required on Operations with Sines (Mujmal al-maṭlūb fi'l-`amal bi rub` al-juyūb) - Berlin (5823), Cairo (falak 6704, mīqāt 167/7, 183/3, 624/1, 639/12, Fāḍil mīqāt 245/2, Khalil mīqāt 10/2, Ṭal`at majlis 442/2, mīqāt 79/5, Taymūr riyāḍa 62/2, 283), Calcutta (1500/3), Escorial (II 970/7), Hyderabad (Osm. 1350), Leiden (710/2, 951/11, 1001/3, 7081/7), Oxford (I 1041/4), Rabat (451/4), Tripoli (Um. 1184/1). Description of the Berlin manuscript: Ahlwardt [1] (246).

A6. Folios of the Treatise of al-Maridīnī on Operations with the Sine Quadrant (Waraqāt `alā risālat al-Māridīnī fi'l-`amal bi'l-rub` al-mujayyab) - Tripoli (Um. 1108).

A7. Limit of Use on Operation with a Part on the End of Arc of Altitude (Ghāyat al-intifā` fi'l-`amal bi'l-bakhsh alladhī fi ākhir qaws al-irtifā`) - Cairo (mīqāt 138/6, 1093/12), Escorial (970/9).

A8. Treatise on Operations with the Quadrant of [Astrolabe] Shakāziyya (Risāla fi'l-`amal bi rub` al-shakāziyya) = Introduction on Knowledge of Operations with the Quadrant of [Astrolabe] Shakāziyya (Muqaddima fi ma`rifat al-`amal bi rub` al-shakāziyya) - Cairo (mīqāt 138/4 - anonymous), Damascus (3098 - anonymous, 7463), Istanbul (SM Fatih 5397/20 - anonymous). Edition with English translation and research: King [6] (219-242).

A9. Concise Treatise on Operations with the Sine Quadrant (Risāla mulakhkhaṣa fi'l-`amal bi'l-rub` al-mujayyab) - Cairo (Fāḍil mīqāt 245/2). Treatise in 30 chapters.

A10. Abridgement of what is Required on Operations with the Sine Quadrant (Mujmal al-maṭlūb fi'l-`amal bi rub` al-juyūb) - Cairo (mīqāt 183/3, Ṭal`at majlis 442/2, Taymūr riyāḍa 283). Treatise in 20 chapters.

776. AHMAD AL-BASATI

Shihāb al-Dīn Abū'l-`Abbās Aḥmad al-Basāṭī (14-15th c.), astronomer.

See: SSM (67).

A1. [Notes on the Treatise of al-Maridīnī] - Cairo (falak 4026/2). Commentary on the work (No 766, A1) of al-Qomanatī.

777. `ALI AL-HAYTHAMI AL-TUBNAWI

`Alī ibn Muḥammad ibn Aḥmad al-Haythamī al-Tubnawī al-Mālikī al-Ash`arī (14-15th c.), Egyptian astronomer.
See: GAL (II 92-93), GAL² (94), SSM (67).
A1. Relief for the Hearts from Tiredness connected with the Sine Quadrants] (Rāḥat al-qulūb min ta`b al-aṭnāb fi'l-juyūb) - Cairo (mīqāt 87).

778. MAHMUD AL-MURSHIDI

Maḥmūd ibn Aḥmad ibn Maḥmūd al-Ṣāliḥī al-Murshidī (14-15th c.), astronomer.
See: GAL² (II 1022), MAA (198), MAMS (III 24), SSM (67).
A1. Clear Words on Operations with the Winged Quadrant (al-Lafẓ al-muṣarraḥ fi'l-`amal bi'l-rub` al-mujannaḥ) - Cairo (mīqāt 142). Description of the manuscript: Kunizsch [1] (55). Treatise in 35 chapters.

779. ISMA`IL AL-HAMAWI

Ismā`īl ibn Hibatallāh al-Ḥamawī (14-15th c.), Syrian astronomer from Hama.
See: KZ (III 399), MAMS (III 21), SSM (68).
A1. Treatise on Triquetrum and Operations with It (Risālat dhāt al-shu`batayn wa'l-`amal bihā) = Description of Operations with Instrument Called Triqueter (Ṣifat al-`amal bi'l-āla musammāt dhāt al-shu`batayn) = Treatise on Operations with Triquetrum (Risāla fi'l-`amal bi dhāt al-shu`batayn) - Cairo (Ṭal`at mīqāt 102/8 - under the third title), Escorial (II 961/1 - under the second title), Tehran (Senat 7672/38 - under the first title). Description of the Escorial manuscript: Derenbourg [7] (97). Treatise in 7 chapters.

780. AHMAD IBN AL-QUNFUDH AL-QUSANTINI

Abū'l-`Abbās Aḥmad ibn al-Ḥasan ibn al-Khaṭīb ibn al-Qunfūdh al-Qusanṭīnī (1330-1407), from Constantine, mathematician and astrologer, author of commentary on astrological treatises of al-Marwazī (No 151) and Ibn Abī'l-Rijāl (No 353).
See: GAL (II 313), GAL² (II 341), MAA (170-171), MAA³ (174), MAMS (II 470-471, III 16), SSM (139); Guergour [1a, 1b], [2] (ENWC), Hadj-Sadok [2].
M1. Removal of the Veil from faces of Arithmetic Operations (Ḥaṭṭ al-niqāb `an wajūh a`māl al-ḥisāb) - Rabat (2429; Publ. 16780).
M2. Deliverance from Commentary on "Concise Exposition" (al-Takhlīṣ fī sharḥ al-Talkhīṣ) - Rabat (Publ. 9390). Commentary on the work (No 696, M1) of Ibn al-Bannā.
M3. Commentary on "Poem on arithmetic " of `Ali ibn Abī Rijāl al-Qayrawanī (Sharḥ Urjuza fī"l-ḥisāb li `Ali ibn Abī al-Rijāl al-Qayrawānī) - Istanbul (SM Laleli 2737). Commentary on the Poem (No 353, M2) of Ibn Abī al-Rijāl.
A1. Book of Simplification of Problems of Equations of Planets (Kitāb tas'hīl al-maṭālib fī ta`dīl al-kawākib) - Madrid (Nav. X/2), Fas (Zawiya 4c). Commentary on the work (No 696, A3) of Ibn al-Bannā.
A2. [Commentary on Astrological Poem of Ibn Abī'l-Rijāl] - Cairo (falak 8531/1, mīqāt 101, 648, 857, 930, Fāḍil mīqāt 8, Ṭal`at mīqāt 133/3, Taymūr riyāḍa 222/1), Escorial (II 909/4). Description of the Escorial manuscript: Derenbourg [7] (9-10). Commentary on (No 353, A1) of Ibn Abī'l-Rijāl.

781. SA`ID AL-UQBANI

Abū `Uthmān Sa`īd ibn Muḥammad al-`Uqbānī al-Gharnāṭī (d. 1408), mathematician from Granada.
See: GAL² (II 1018) , MAA (202), MAMS (III 38).
M1. Commentary on "Concise Exposition " (Sharḥ al-Talkhīṣ) - Escorial (930). Commentary on the treatise (No 596 M1) of al-Dalaili.

782. TAQI AL-DIN AL-HANBALI

Taqī al-Dīn ibn `Izz al-Dīn al-Ḥanbalī (d. 1409), mathematician.
See: GAL² (II 156), IHS (III 1527), MAA (199), MAMS (II 471).

M1. Comprehensive Core of the Science of Arithmetic (Ḥāwī al-lubāb fī 'ilm al-ḥisāb) - Paris (2469). French translation of chapter on examining arithmetic operations: Carra de Vaux [8].

M2. Commentary on [Poem of] Ibn al-Yasmini (Sharḥ al-Yāsamīniyya) - Vienna (1507/1). Commentary on algebraic poem (No 521, M1) of Ibn al-Yāsamīn.

783. SHIHAB AL-DIN IBN AL-HAIM

Shihāb al-Dīn Abū'l-'Abbās Aḥmad ibn Muḥammad ibn 'Imād ibn al-Hāim al-Faraḍī (ca 1355-1412), born in Cairo, taught mathematics in Ṣalāḥiyya madrasa (founded by Saladin) in Jerusalem, where he died.

See: GAL (II 153-155), GAL² (II 154-155), IHS (III 1527-1528), KZ (I 246, 359, II 236, III 13, 321, IV 184, 432, 441-442, 578, V 218, 220, 331-332, 494, 639-640, VI 28, 95, 325, 440), MAA (171-172), MAA² (178), MAMS (II 472-474), SSM (68-70), STIM (421-422); Tuqan [1] (439-441).

M1. Guidebook for the Science of Mental Reckoning (Kitāb al-ma'ūna fī 'ilm al-ḥisāb al-hawā'ī) - Alexandria (hisab 16, 20), Berlin (5984), Cairo (falak 4313/2 - a fragment, 21658, riyāḍa 68-69, 256/2, Fāḍil riyāḍa 32, Taymūr riyāḍa 93, Zaki 226), Damascus (6132, 9260-9261), Istanbul (BU Veliyuddin 2333), Milan (245), Princeton (Yehuda 306, 411), Rome (Sbath 780), is quoted in KZ (III 13, V 639-640, VI 440). Description of the Berlin manuscript: Ahlwardt [1] (339-340). Treatise contains introduction and 3 parts (2+10+3= 15 chapters): 1) operations with integers, 2) operations with fractions, 3) operations with roots. In addition it contains rules of summation of progressions and figurate numbers, finding unknown quantities by proportions and double false position and problems; it was written in 1389.

M2. Concise [Treatise] on the Science of Open Mental [Reckoning] (Mukhtaṣar fī 'ilm al-maftūḥ al-hawā'ī) - Cairo (riyāḍa 112/2). Description of the manuscript: Sayyid [1] (80-81).

M3. Treatise on Mental Art (Risāla fī ṣinā'at al-hawāī) - Cairo (riyāḍa 348/3).

M4. Treatise on the Science of Arithmetic (Risāla fī 'ilm al-ḥisāb) - Kabul (Matb. 21).

M5. Right Direction of the Pupil to the Highest Aim (Murshidat al-ṭālib ilā asnā al-maṭālib) = Right Direction in the Art of [Figures] Ghubar (al-Murshida fī ṣinā'at al-ghubār) - Beirut (233/2; Safa 23-24), Berlin (5978), Cairo (falak 3815/4, 4290, Zaki 778/2), Damascus (3081, 4428, 4904), Gotha (1479/2 - introduction, 1480 - beginning, 1481), Istanbul (SM Laleli 2762), Leipzig (827), London (429/5), Manchester (353/A, 354), Mosul (103/61), Paris (2475/5), Princeton (1035-1036, Yehuda 3940), is mentioned in KZ (V 494) under the first title. Description of the Berlin manuscript: Ahlwardt [1] (335). Description of the Gotha manuscript: Pertsch [3] (108-109).

M6. Illumination on the Science of Arithmetic (al-Luma' al-yasīra fī'ilm al-ḥisāb) - Algiers (1447), Berlin (5987), Cairo (falak 3815/1, 4304, maj. 89/4, riyad, 64, 341, 920, 1087/1, Fāḍil riyāḍa 25-26, Taymur maj. 58/9, riyāḍa 270/1, Zaki 667), Calcutta (1455), Damascus (5262, 6897), Gotha (1483), Istanbul (SM Laleli 2723/4, 2758/1), Jakarta (Sup. 613), Jerusalem (176), London (200, 421/1, 429/5), Najaf (Ayatallah 139), Oxford (I 971/6), Paris (2471, 4162/2, 4585/5), Princeton (Garr. 1035-1036, 2111/3, 2145/1; Yehuda 479, 3940, 4152, 4304, 4468, 4599), Rome (Vat. 1271/1), is mentioned in KZ (V 332). Description of the Berlin manuscript: Ahlwardt [1] (340). Description of the Gotha manuscript: Pertsch [3] (111). Description of the Princeton manuscripts: Hitti, Faris, and Abd al-Malik [1] (325). Research: Woepcke [14] (53-55).

M7. Sufficient for Reckoners on the Science of Arithmetic (Ghunyat al-ḥussāb fī 'ilm al-ḥisāb) = Delight of Observers in Arithmetic in Terms of [Figures] Ghubar (Nuzhat al-nuẓẓār fī'l-ḥisāb bi qalam al-ghubār) = Delight of Arithmetic (Nuzhat al-ḥisāb) = Abridgement of the "Right Direction" (Mukhtaṣar al-Murshida) - Beirut (228-231, 233/1, 235/2), Berlin (5979-5980, 5980a-c), Budapest (O 28), Cairo (falak 17104, 21657, maj. 226/3, 861/7, riyāḍa 83/2, 94, 181/5, 297, 308, 312, 392/3, 748/3, 1086, Fāḍil riyāḍa 34, Taymur riyad 147/1), Damascus (59, 3076, 3079, 3088, 4269, 4588, 6666, 6993, 10826), Gotha (1479/2, 1481), Jerusalem (94, 430), London (894/2, 1197/2, Sup. 749), Oxford (I 489/2, II 287/2), Princeton (1033; Yehuda 479, 2332, 3398, 3846, 4304), Sarajevo (2440/1), Vienna (1363). Description of the Berlin manuscripts: Ahlwardt [1] (336-337). Description of the first Princeton manuscript: Hitti, Faris and 'Abd-al-Malik [1] (325).
KZ (VI 325) indicates that this work is an extract from M1.

M8. Means in the Science of Arithmetic (al-Wasīla fī 'ilm al-ḥisāb) = Means in the Art of Mental [Reckoning] (al-Wasīla fī ṣinā'at al-hawā'ī) - Baghdad (Sup. 321). Berlin (5985-5985a), Cairo (riyāḍa 70-71, 181/1, 256/1, 557/2, 748/2, Taymūr riyāḍa 1, 105/2), Calcutta (1454), Damascus (4280), Florence (Lor. 317, Istanbul (SM Laleli 2714/1, 2766/1), Paris (5985), Princeton (1034; Yehuda 4715), Sarajevo (2440/4). Description of the Berlin manuscript: Ahlwardt [1] (340).
KZ (VI 440) mentions that this work is an abridgement of M1.

M9. Sufficient on Algebra and Almucabala (al-Muqni` fi'l-jabr wa'l-muqābala) - Berlin (5991), Cairo (maj. 703/5, Taymur riyāḍa 289/3, 360/2, 611, 703/5), Gotha (1484-1485, 1491/3), Sarajevo (2440/4), Tunis (Nat. 18263/1), Vienna (1507/2), is mentioned in KZ (VI 95). Descriptions of the Gotha manuscripts: Pertsch [3] (112, 117-118). Rhymed treatise with rhyme on Lam.

M10. Fascinating Commentary on "Sufficient on Algebra and Almucabala" (al-Mumti` fi sharḥ al-muqni` fi'l-jabr wa'l-muqābala) - Cairo (riyāḍa 920, Ṭal`at riyāḍa 127, Taymur maj. 289/3), Damascus (24/1), Istanbul (SM Laleli 2750/1), Tunis (Nat. 18263/2). Versed commentary on M9.

M11. Quick Abridgement of "Fascinating in Commentary" and Its Commentary on "[Sufficient on] Algebra and Almucabala" (al-Musri` mukhtaṣar al-Mumti` wa sharhuhu fi'l- jabr wa'l-muqābala) - Alexandria (funun 82/9), Berlin (5991), Cairo (falak 3815/2, maj. 472/4, Taymur maj. 289/4, riyāḍa 17), Damascus (24/3), Gotha (1484-1485), Hyderabad (riyāḍa 373), Istanbul (Millet Feyzullah 1366), Mosul (246, 359/3), Patna (2428), Princeton (Yehuda 479, 4304), Sarajevo (2440/5). Description of the Berlin manuscript: Ahlwardt [1] (342).

M12. Poem on the Science of Algebra and Almucabala and Arithmetic (Manẓuma (Qaṣida) fi `ilm al-jabr wa'l-muqābala wa'l-ḥisāb) - Damascus (4823, 8226), is mentioned in KZ (I 246, II 236).

M13. Commentary on [Poem of Ibn] al-Yāsamin (Sharḥ al-Yāsaminiyya) = Book on Precious Pearls in Commentary on Poem of Ibn al-Yasmin (Kitāb al-durr al-thamin fi sharḥ Urjuzat Ibn al-Yasmin) - Cairo (falak 4313/1, riyāḍa 1, 93, 181/12, Fāḍil riyāḍa 18-19), Damascus (3084, 9251), Gotha (1475-1476), Hyderabad (riyāḍa 8), Jerusalem (Yehuda 671), Oxford (I 966/6, 1238/1), Patna (2427), Princeton (Yehuda 4401) - is mentioned in KZ (I 246, 359). Description of the Gotha manuscripts: Pertsch [3] (104-105). Commentary on the work (No 521, M1) of Ibn al-Yāsamin was written in 1387 in Mecca. M14. Limit of Desire in Establishing Unknown Debt (Ghāyat al-su'l fi'l-iqrār bi'l-dayn al-majhul) - Cairo (maj. 33/2, Fāḍil riyāḍa 21, Taymur riyāḍa 140/8), Calcutta (1478). Treatise on inheritance.

M15. Twelve Collected Problems by Principles of Establishing unknown Cyclic Debt (Ithnā `ashara masā'il jāmi`a li uṣul masā'il al-iqrār bi'l-dayn al-majhul al-dawri) - Cairo (maj. 33/3, riyāḍa 1090). Treatise on inheritance.

M16. Truths of Subtleties on Subtleties of Truths (Ḥaqā'iq al-daqā'iq `alā daqā'iq al-haqā'iq) - Cairo (miqāt 49), Jerusalem (178). Description of the Cairo manuscript: Kunitzsch [1] (31). Commentary on the work (No 815, M1) of Ibn al-Majdi.

M17. Abridged "Concise Book" of Ibn al-Bannā (Mukhtaṣar Talkhiṣ Ibn al-Bannā) - Cairo (Taymyr maj. 82/12)

M18. Treatise on Operations with Carats (Risāla fi `amal al-qirāṭ). Commentary on this work: Cairo (`ulum 23937/3 - anonymous). Treatise on measuring operations of precious stones.

M19. Window (al-Shubbāk) - Rabat (2430).

M20. Introduction to Operation of Exclusion by Tables (Muqaddima fi `amal al-munāsakhāt bi'l-jadwal) = Section on the Science of Exclusion by Tables (Faṣl fi `illat al-munāsakhāt bi'l-jadwal) - Beirut (237/2 - under the first title), Cairo (falak 4309/2, majlis 703/1, riyāḍa 83/3, `ulum 23196. 23205, 23799, Taymur riyāḍa 138/2 - under the second title).

M21. Jerusalem's Gift on the Science of Inheritance (al-Tuḥfa al-Qudsiyya fi `ilm al-farāiḍ) - Cairo (`aqā'id 3964/8). Abridgement of the poem (No 493, M1) of al-Raḥbi.

M22. Comprehensive [Work] on Arithmetic (al-Ḥāwi fi'l-ḥisāb) - Cairo (`aqā'id 3964/1, Taymur majlis 86/12). Abridgement of the work (No 696, M1) of Ibn al-Bannā.

M23. Abridged [Treatise] on the Science of Open Mental Arithmetic (Mukhtaṣar wajiz (talkhiṣ) fi `ilm al-ḥisāb al-maftuḥ al-hawā'i) - Cairo (riyāḍa 112/2 - incomplete, Taymur majlis 82/12).

M24. Important Sections on Inheritance for People (al-Fuṣul al-muhimma fi mawārith al-umma). Commentary on this work: (No 873, M19) by Sibṭ al-Maridini.

M25. Sufficient for the Memorizer (Kifāyat al-ḥuffāẓ). Commentary on this work (No 873, 20) by Sibṭ al-Maridini.

M26. Key of Arithmetic (Miftāḥ al-ḥisāb) - is mentioned in KZ (VI 28), Commentary on this work: (No 785, M1) by Ibn Sharaf.

784. `ALI IBN HAYDUR AL-TADLI

Abu'l-Ḥasan `Ali ibn Musā ibn `Abdallāh ibn Muḥammad ibn Haydur al-Tādli (d. 1413), born in Tadla, Morocco, worked in Fas; mathematician.

See: GAL[2] (II 366), MAA[3] (179), MAMS (II 475), SSM (141).

M1. Gift to Pupils on the Science of Arithmetic (Tuḥfat al-ṭullāb fī 'ilm al-ḥisāb) - Granada (Sugro 81), Rome (Vat. 1403).

M2. Book of Research on Commentary on "Concise Exposition" (Kitāb al-tamḥīṣ fī sharḥ al-Talkhīs) - Cairo (Ṭal'at riyāḍa 103), Fas (Zāwiya 86/14). Commentary on the work (No 696, M1) of Ibn al-Bannā.

A1. Theoretical Reasonings on Prediction by Stars (al-I'tibārāt al-naẓariyya fi'l-aḥkām al-nujūmiyya) - Escorial II/3), Rabat (Hasan 252).

785. 'IMAD AL-DIN IBN SHARAF

'Imād al-Dīn Ismā'īl ibn Ibrāhīm ibn Sharaf (d. ca 1440), jurist and mathematician.

See: KZ (II 437, III 10, VI 26), MAMS (II 475).

M1. Tooth of a Key (Asnān al-miftāḥ) - is mentioned in KZ. Commentary on the "Key of Arithmetic" (No 783. M25) of Ibn al-Hā'im.

786. JAMAL AL-DIN AL-DIMASHQI

Jamāl al-Dīn ibn A'azz al-Dimashqī (14-15 c.), from Damascus, Syrian mathematician.

See: GAL^2 (154), SSM (70).

M1. Gift to Pupils in Commenting "Delight of Arithmetic" (Tuḥfat al-ṭullāb fī sharḥ Nuzhat al-ḥisāb) - Cairo (riyāḍa 662, Taymūr riyāḍa 124 - both anonymous). Commentary on the work (No 783, M7) of Ibn al-Hā'im.

787. MUHAMMAD IBN AL-BILBAYSI

Muḥammad ibn Muḥammad ibn Abī Bakr al-Azharī (Ibn al-Bilbaysī) (14th c.); Egyptian mathematician.

See: MAA (199), MAMS (III 31), SSM (70).

M1. Commentary on "Means" (Sharḥ al-Wasīla) = Great Beauty in Resolving Words of "Means" (al-Zahra al-jalīla fī ḥall alfāẓ al-Wasīla) - Cairo (falak 4325), Leipzig (Ref. 270). Commentary on the work (No 783, M8) of Ibn al-Haim.

M2. Comments on "Assistance" (Ḥāshiya li'l-Ma'ūna) - Cairo (riyāḍa 11), Princeton (Yehuda 306). Commentary on the work (No 783, M1) of Ibn al-Hā'im.

788. ALI AL-JURJANI

Zayn al-Dīn Abū'l-Ḥasan 'Alī ibn Muḥammad al-Sayyid al-Sharīf al-Jurjānī (1340-1413), born in Jurjan, Northern Iran, studied in Herat, Kirman, and Egypt; worked in Shiraz; went to Samarkand after Shiraz was conquered by Timur in 1387. When Timur died in 1405, he returned to Shiraz where he lived until his death. He was a philosopher, theologian, astronomer, and grammarian.

See: GAL (II 280-281), GAL^2 (II 305-306), IHS (III 1461), KZ (I 10, 24, 90, 93, 136-137, 157, 160, 211, 216-217, 295, 298, 384, 480, 509, II 12-16, 26, 195-199, 230, 268-269, 304, 320, 363, 367, 404, 408-409, 445, 449, 589, III 102-103, 169, 371, 375, 379, 382, 392, 416, 424, 439, 446-447, 452-454, 578-579, IV 76, 168, 276-278, 311, 401, 476, V 7-8, 12, 32, 187, 236, 268, 568, 595, VI 17-18, 86, 114, 153, 172, 236, 346, 463, 491), MAA (172), MAA^3 (174-175), MAMS (II 475-476), PL (I 203, 447, 560, 1360), SSM (156), STMI (293, 602); Brockelmann [9] (EI), Browne [4] (355), Farmer [4] (58), Kapp [1] (71), M.Qadyrov [1-2], Tritton [1] (EI^2).

E1. Super-commentary on "Wisdom of Source" (Ḥāshiya 'alā Ḥikmat al-'ayn) - Tashkent (6637/3), is quoted in KZ (III 103). Commentary on the work (No 616, E1) of al-Qazwini.

E2. Keys of Sciences on Definitions and Rules (Maqālīd al-'ulūm fi'l-ḥudūd wa'l-rusūm) - London (Sup. 487, 715). Definitions of 21 sciences: 1-5) theology and scholastics, 6-10) dialectics, grammar, rhetoric, 11) logic, 12) philosophy, 13) astronomy, 14) geometry, 15-17) arithmetic and music, 18) astrology, 19) medicine, 20) ethics, 21) sufism.

E3. Book of Definitions (Kitāb al-ta'rīfāt). Editions: al-Jurjānī [1, 3]. Research: by Flügel - in al-Jurjānī [1], M. Qadyrov [1]. Revision of the work (No 616, E1) of al-Katibi al-Qazwini.

M1. Super-commentary on Commentary on "Abridged Euclid" (Ḥāshiya 'alā Sharḥ Mukhtaṣar al-Uṣūl) - Mashhad (2869-2876). Super-commentary on Euclid's "Elements".

M2. Super-commentary on Exposition by Naṣīr al-Dīn al-Ṭūsī of the work "Elements" of Euclid (Ḥāshiya `alā Taḥrīr Naṣīr al-Dīn al-Ṭūsī li kitāb al-Uṣūl li Uqlīdis) - Cairo (riyāḍa 530). Super-commentary on the commentary (No 606, M1) of al-Ṭūsī.

M3. Commentary on Siraj al-Dīn's [Treatise on] Inheritance (Sharḥ al-Farā'iḍ al-Sirā-jiyya) - Dushanbe (1279/2), Tashkent (1693/4, 1756/2, 3065/5, 3878/5, 4077/2, 4896/1, 5013/2, 5877/2, 6011/1, 6153/2, 6193/1, 6305/2, 6546, 7702/5, 8044/1, 8604/2, 8830). Commentary on the work (No 527, M8) of al-Sajawandī.

A1. Commentary on "Memoir" of Naṣīr al-Dīn (Sharḥ al-Tadhkira al-Naṣīriyya) - Alexandria (ḥisāb 39), Aligarh (Azad. `Abd al-Ḥayy 662, 653/30), Beirut (Barudi V 135), Berlin (5681), Cairo (falak 8529 - wrongly ascribed to al-Naysabūrī (No 686); hay`a 11, 79, 86, 91, 103, 233), Istanbul (SM AS 2644, Fatih 3495, Laleli 2124), Leiden (637, 689), London (5575-5576; Ind. 746-747), Mashhad (5345, 5567-5568; Univ. 310), Mosul (179/132), Oxford (II 292), Paris (4944), Patna (2052, 2146, 2449-2450, 2856), Princeton (978-979), Rampur (hay'a 46-47, 294a, I 427/26), St. Petersburg (C 615; Nat. Khan. 122), Tashkent (2655/1), Tehran (Zanjani V 202), is mentioned in KZ (II 269). Description of the Berlin manuscript: Ahlwardt [1] (161-163). Commentary on the work (No 606, A10) of al-Ṭūsī.

A2. Commentary on the Book of al- Jaghmīnī (Sharḥ kitāb al-Jaghmīnī) - Alexandria (ḥisāb 39), Aligarh (Azad. `Abd al-Ḥayy 630/7), Baku (B 337/2), Beirut (188), Cairo (hay`a 1, 21, 68/2, 94, 96, Kavala hay'a 7, Ṭal`at hay'a 31), Escorial (II 956, 967), Gotha (1388), Istanbul (SM AS 2649, Carullah 1469, Fatih 3508-3510), Leiden (202/1, 234/3), Mashhad (40/12-13), New Haven (1478), Paris (2505), Peshawar (173), Princeton (978-979; Yehuda 4197, 4502), Rabat (440), St. Petersburg (A 589/1, 645/1; Univ. 90/2), Tashkent (2655/3), Tübingen (222), Vienna (1322) - is mentioned in KZ (VI 114). Description of the Escorial manuscripts: Derenbourg [7] (92-93, 111-112). Commentary on the work (No 547, A1) of al-Jaghmīnī.

PH1. Logical Treatises: a) Great Treatise (al-Risāla al-kubrā), b) Short Treatise (al-Risāla al-ṣughrā). Edition: al-Jurjānī [2]. Research: M. Qadyrov [1, 2].

PH2. Treatise on Research of Existence (Risāla fī taḥqīq al-wujūd). Edition: al-Jurjānī [4]. Research: M. Qadyrov [2].

789. MUHAMMAD AL-JURJANI

Shams al-Ma`ālī Muḥammad Kiyā Jurjānī (d. 1414), born in Jurjan; astronomer.

See: MAMS (II 476-477).

A1. Keys to "Twenty Chapters" (Mafātiḥ-i Bīst bāb) P - Mashhad (181). Commentary on the work (No 606, A14) of al-Ṭūsī.

A2. Saturn and Sphere of Fixed Stars (Zuḥal wa kura-yi thawābit) P - Mashhad (96).

790. `ABD AL-RAHMAN AL-JADARI

Abū Zayd `Abd al-Raḥmān ibn al-Ghālib al-Lakhmī al-Jādarī al-Madyūnī (1375-1435), worked in Fas as timekeeper in the Cathedral mosque.

See: GAL[2] (II 217-218), IHS (III 1524), MAA (172), MAA[3] (175), MAMS (II 477), SSM (139).

A1. Garden in Full Bloom on Timekeeping by Night and Day (Rawḍ al-azhār fī `ilm waqt al-layl wa'l-nahār) - Algiers (613/13), Cairo (mīqāt 181/1, 957/1, 1122, Taymūr riyāḍa 55/3, 87), Escorial (II 952/12), London (411/2), Rabat 450/4, 457/7, 2499-2501). Description of the Escorial manuscript: Derenbourg [7] (89). Poem on timekeeping and calendars, written in 1392.

A2. [Astronomical Poem] - Madrid (341/6).

791. `ABD AL-WAHID IBN MUHAMMAD

`Abd al-Wāḥid (`Abd al-Wājid) ibn Muḥammad ibn Muḥammed al-Ḥanafī (d. 1435), Ottoman astronomer.

See: GAL (I 512, 1898), GAL[2] (I 931), IHS (III 1530), KZ (III 643, IV 545, VI 114, 192, 373), MAA (172-173), MAMS (II 477), OALT (22-24), SSM (156); Pingree [33] (EIr).

A1 Commentary on "Thirty Chapters" (Sharḥ-i Sī faṣl) P - Amasya (1791/3), Cairo (mīqāt 933, 942, Ḥalīm mīqāt 12), Istanbul (SM Carullah 2108, Lala İsmail 278/3) Leiden (1179), Paris (2511/2). Commentary on the work (No 606, A16) of al-Ṭūsī.

A2 Poem on the Astrolabe (Manẓūma fi'l-asṭurlāb) = Doctrine on Times and Its Explanation (Ma`ālim al-awqāt wa sharḥuhu) - Afyon (1830/4), Bursa (Haraççıoğlu 1176/2), Istanbul (SM Hamidiye 874/1), Manisa (1695/4)

under the second title, the first title is mentioned in KZ. The treatise was written for his pupil al-Fanarī (No 806).

A3 Commentary on "Compendium" (Sharḥ al-Mulakhkhas) - Istanbul (SM Laleli 2127, Feridun Nafiz Uzluk 7097, Feyzullah Efendi 1346/2) - is mentioned in KZ (VI 144). Commentary on the work (No 547, A1) of al-Jaghmīnī

792. IBN ZAKARIYA AL-AWSI

Ibn Zakarīyā al-Awsī (14-15[th] c.), mathematician.

See: GAL[2] (II 1025), MAA (292), MAMS (II 477-478), STMI (398).

M1. Aim of Demanding Use and Support of Desiring Augmentation (Bughyat al-ṭālib al-mustafīd wa `umdat al-rāghib al-mustazīd). Only an extract M2 is extant.

M2. Problems of Algebra and Almucabala (Masā'il fī'l-jabr wa'l-muqābala) - London (420/2). Extract from M1.

M3. Collection of Treatises (Majmū` al-rasāil) - Istanbul (Atıf 1360).

793. IBN ZAKARIYYA AL-GHARNATI

Ibn Zakariyyā Al-Gharnāṭī (14-15 th c.), Spanish mathematician from Granada.

See: MAA[3] (177) , MAMS (II, 477-478)

M1. Commentary on "Concise exposition" of Ibn al-Bannā (No 696) (Sharḥ talkhīṣ Ibn al-Bannā) - Escorial (II 934). Description of the manuscript Derenbourg [7], (46-47). Commentary on the work (No 696, M1) of Ibn al-Bannā.

794. HUMAM AL-TABIB

Muḥammad ibn Muḥammad Humām al-Ṭabīb (14-15[th] c.), Turkish physician (al-ṭabīb) and astronomer.

See: GAL[2] (I, 865), SSM (156).

M1. [Treatise on Arithmetic] T- Cairo (Fāḍil mīqāt turkī 7/3). Treatise on sexagesimal arithmetic in 6 chapters.

A1. [Commentary on "Compendium"] - Cairo (Hay'a 41). Commentary on (No 547, A1) of al-Jaghmīnī, written in 1405.

795. MUHAMMAD IBN ZURAYQ AL-KHAYRI

Muḥammad ibn `Alī ibn Zurayq al-Khayrī al-Jabartī al-Shāfi`ī (14-15[th] c.), timekeeper of the Umayyad Mosque in Damascus.

See: GAL[2] (II 157, 1023), IHS (III 1526), MAA (173), MAA[3] (175), MAMS (II 478), OALT (155-158), SSM (87) OALT mentions that he died in 1570.

M1. Abridgement of Explanations and Exposition of Binomials and Apotomes (Talkhīṣ al-`ibārāt wa īḍā ḥ al-ishārāt dhawāt al-asmā' wa'l-munfaṣilāt) - Algiers (1450/1).

A1. Explanation of Indications of the Visibility of the Crescent (Mūḍiḥ al-adilla fī ru'yat al-ahilla) - Istanbul (Millet, Ali Emiri Arabi 2770/7), Leibzig (880), Leiden (880/1), Chester Beatty (4065).

A2. Treatise on Helping the Successful Operations with the Sine Quadrant (Risālat al-nashr al-muṭayyab fī'l-`amal bi'l-rub` al-mujayyab) - Adana (404/5), Aleppo (IHAS 98, Ma`had al-Turas al-ilmî al-Falakî University Aleppo İlm al-Falak No. 14), Baghdad (Awqaf-ı `Amme 12297, Mathaf al-Iraqi 27329/3), Balıkesir (1232/3), Berlin (5828), Beirut (American Univesity No . MS520 M23mA old No 600/3), Bratislava (294), Burdur (974/4), Bursa (Genel 4862, Orhan Gazi 941/4, Ulu Cami 3555/4), Cairo (233, mīqāt 497/1, 559, 639/8, 1082/7, riyāḍa 363/4, Fāḍil mīqāt 233, Taymūr riyāḍa 64/3, 162), Çorum (3059/6), Edirne (Selimiye 6123/3), Erzincan (133/9. 137/4), Giresun (151/2), Istanbul (SM Yazma Bağışlar 1350/6, Fatih 5319/3, Pertevniyal 975/2, Bağdadlı Vehbi 2063/1, Laleli 2728/1; Köprülü II. Kısım 347/2; Millet, Ali Emiri Arabi 2757/3), Tavşanlı (Zeytinoğlu 803/3), Tırnovalı (1230), Yozgat (835/1), Princeton (Yehuda 317, 4275), Rabat (449/11) Two versions, in 15 and 20 chapters.

A3. Fragrant Gardens on Concise Exposition (Abridgement) of Zīj of Ibn al-Shāṭir (al-Rawḍ al-`aṭir fī talkhīs (mukhtaṣar) zīj Ibn al-Shāṭir) - Bursa (Haraççıoğlu 1175), Cairo (Taymūr riyāḍa 235 - a fragment), Gotha (1403), Istanbul (SM Izmirli 488/1), Paris (2520/2), Rabat (2498). Revision of the zīj (No 750, A9), Ibn al-Shāṭir.

A4. Operations with the al-Shamsiyya Almucantar Quadrant (al-Lafẓ al-muḥarrar (al-mu`aṭ`ṭ`ar) fi'l-a`māl bi'l-rub` almuqanṭar) - Cairo (Fāḍil mīqāt 187/3, Taymūr riyāḍa 64/1). Treatise in 14 chapters.

796 MUHAMMAD IBN IDRIS

Muḥammad ibn Idrīs (14-15th c.), astronomer.

See: GAL² (II 1023), MAMS (III 30), SSM (66).

A1. Introduction to the Science of Timekeeping (Muqaddima fi `ilm al-mīqāt) - Cairo mīqāt 894, Ṭal`at mīqāt 117), Damascus (41), Paris (2548). Treatise was written in 1388.

797 SHARAF AL-DIN AL- KHALILI

Sharaf al-Dīn Abū `Imrān Mūsā ibn Muḥammad ibn `Uthmān al-Khalīlī (14-15th c.), born in Hebron, Palestine; timekeeper of the Umayyad Mosque in Damascus, probably son of (No 764), Shams al-Dīn al-Khalīlī.

See: GAL² (II 157-158), IHS (III 1527), MAA (173), MAMS (II 478-479), SSM (65).

A1. (Problems of) Concise Exposition on the Knowledge of Times of Prayers and Direction of the Qibla without Instrument (Talkhīṣ (Masā'il mulakhkhaṣāt) fi ma`rifat awqāt al-ṣalāt wa jihāt al-Qibla `inda `adam al-ālāt) - Berlin (5684), Cairo (mīqāt 454, Khalīl mīqāt 10/5), Oxford (I 1023/10), Paris (2574/12). Description of the Berlin manuscript: Ahlwardt [1] (166). Treatise contains 5 problems.

A2. Treatise on the Astrolabe and Knowledge of Timekeeping (Risāla fi'l-asṭurlāb wa ma`rifat al-awqāt) - Leipzig (880/2).

A3. Treatise on Operations with the Astrolabe (Risāla fi'l-`amal bi'l-asṭurlāb) - Princeton (Yehuda 1168).

A4. Treatise on Hidden Quadrant for the Latitude of Damascus (Risāla fi'l-rub` al-musattar bi `arḍ Dimashq) - Paris (2547/8).

A5. Treatise on Operations with the Almucantar Quadrant (Risāla fi'l-`amal bi rub` al-muqanṭarāt) - Princeton (Yehuda 1168, after A3).

A6. [Treatise on Knowledge of Prayer times and Direction of the Qibla by Means of the Quadrant of Horizons] (Risāla fi ma`rifat awqāt al-ṣalāt wa jihat al-Qibla min al-rub` al-āfāqī) - Cairo (mīqāt 832/4). Treatise in 7 chapters.

A7. Treatises on Operations with the Sine and Almucantar Quadrants (Risāla fi'l-`amal bi rub`ay al-jayb wa al-muqanṭarāt) - Cairo (mīqāt 832/3). Two treatises on operations with the almucantar and sine quadrants in 5 books.

798. `ABD AL-WAHHAB AL-MARIDINI

`Abd al-Wahhāb ibn al-Sheikh Jamāl al-Dīn Yūsuf ibn Aḥmad ibn `Abd al-Raḥmān al-Mālikī al-Māridīnī (d. 1420); physician and astronomer from the earlier period of the Ottomans.

See: GAL² (II 1019), MAMS (III 5), OALT (1-2).

A1. Poem on Thread of Stars (Manẓūma fi silk al-nujūm) - Gotha (409/1, 1396).

A2. Commentary on Treatise of al-Maridīnī (Sharḥ al-Risāla al-Māridīniyya) = Commentary on Treatise on Operations with the Sine Quadrant (Sharḥ Risāla fi'l-`amal bi'l-rub` al-mujayyab) - Istanbul (Univ. 3232/8).

A3. Poem on [Lunar] Stations andTimes of Their Rises at Each [Degree of the Arc of] `Asr (Urjūza fi`l-manāzil wa awqāt ṭulū`ihā fi kull `aṣr) - Cairo (Ṭal`at majlis 811/2), Istanbul (BU 7923/2).

799. AHMAD AL-`IRAQI

Walī al-Dīn Abū Zar`a Aḥmad ibn `Abd al-Raḥīm al-`Irāqī (d. 1423), jurist, philosopher, and mathematician; worked in Cairo; son of famous jurist Zayn al-Dīn `Abd al-Raḥīm al-Ḥusayn al-`Irāqī (1325-1404) (see GAL, II 77-78),

See: KZ (I 158, 246, 344, 433, II 211, 224, 242, 387, 611, III 9, 237, IV 39, 182, 453, V 4, 189, 299, 368, 462, 526, 541, VI 194, 217, 279, 383), MAMS (II 479).

M1. Majestic Gifts of the Poem of Ibn al-Yāsamīn (al-Mawāhib al-saniyya `alā'l-Urjūza al-Yāsamīniyya) = Source to Understanding the Poem of Ibn al-Yāsamīn (al-Ma`īn `alā fahm Urjūzat Ibn al-Yāsmīn) - Calcutta (1475), Vienna (1507/2). Description of the Calcutta manuscript: Hidayat Huseyn [1] (178). Commentary on the work (No 521, M1) of Ibn al-Yāsamīn.

A1. Exact Indications on Correctness of All Calendars (al-Dalīl al-qawīm `alā ṣiḥḥat jamī` al-taqāwīm) - is mentioned in KZ (III 237).

800. SHIHAB AL-DIN AL-KAWM AL-RISHI

Shihāb al-Dīn Aḥmad ibn Ghulāmallāh ibn Aḥmad al-Kawm al-Rīshī (d. 1433), timekeeper of al-Mu'ayyad mosque in Cairo.

See: GAL (II 157), GAL² (II 158), KZ (III 557, V 336), MAA (173), MAA³ (175), MAMS (II 479-480), SSM (65), STMI (363).

A1. Light on Solution [of Problems] on Seven [Planets] (al-Lum`a fī ḥall al-sab`a) - Alexandria (ḥisāb 52), Berlin (5685, 5686-5686a; IGMN II 44, 51), Cairo (falak 2197, 4323, 10967, 22520, mīqāt 171, 404, 556, 603, 637/1, 750, 861, Fāḍil mīqāt 164/2, 196, Ṭal`at mīqāt 125/1, 129/2, 143/1, Taymūr riyāḍa 48, 103/1, 132/3, 185, 207, 275), Gotha (1389), Hyderabad (Salar hay'a 25), Istanbul (SM Selim. 441c), Jerusalem (302), London (6536), Manchester (369/D, Lind. 461a), Oxford (II 243), Paris (2526-2527), Rabat (450/7), Rampur (I 66), Rome (Vat. Borg. 217/6, Sbath 807, 863), Tripoli (Um. 1106/2), Tunis (Nat. 18158). Description of the Berlin manuscripts: Ahlwardt [1] (166-167), Ruska and Hartner [1] (205-206). Treatise in 12 chapters plus introduction with tables for Cairo.

A2. Sufficient for Science on the Composition of the Calendar (Kitāb al-ta`līm fī waḍ` al-taqwīm) - Cairo (mīqāt 117, 127, 167/3, 977/1), Istanbul (NO 2895). Treatise on the composition of ephemerides in 8 chapters.

A3. Delight of the Observer on More Accurate Definition of Principles (Abridgement of Zij) of Ibn al-Shāṭir (Nuzhat al-nāẓir fī taṣḥīḥ uṣūl (talkhīṣ zīj) Ibn al-Shāṭir) - is mentioned in KZ (III 557) under the first title and in A1 under the second title.

801. AL- QAYMARI

Omar b. Muh. al-Qaymarī (14th c.), Egyptian astronomer.

See: SSM (65-66); Kahhala, [1], 7, 308.

A1. Table of [Time] Remaining to `asr for the latitude of Egypt (Jadwal al-bāqī li'l-`aṣr li `arḍ Miṣr) - Cairo (mīqāt 620/8).

802. JAMSHID AL-KASHI

Ghiyāth al-Dīn Jamshīd ibn Mas`ūd al-Kāshī (al-Kāshānī) (d. 1436), born in Kashan, Northern Iran, mathematician and astronomer. In 1413-1414 he dedicated the "Al-Khaqan Zij" to Khaqan Khan of Khans Shahruh, Timur's son (1405-1447); in 1416 he dedicated treatise A11 on astronomical instruments to Sultan Iskandar, nephew of Shahruh, ruler of Isfahan and future Karakoyunlu Sultan (1420-1427) and the ruler in Azerbaijan. Ulugh Beg (No 816), son of Shahruh and ruler of Samarkand, invited him to Samarkand in 1417 to establish an astronomical observatory where he became one of the leaders of the Samarkand scientific school; he died in Samarkand.

See: GAL (II 273), GAL² (II 295), GAS (V 63-69), KZ (I 397, II 16, III 364, 449, 452, 559, IV 155, VI 12, 28, 324, 580), MA (71-80, 157-162), MAA (173-174), MAMS (II 480-486, III 369), PL (II 66-67, 72-73), SSM (157), STMI (317, 377, 396-397); Abdullayev and Hikmatullayev [1] (49-52), Barthold [2] (135-136), Berggren [10] (15-21, 48-61), Jalalov [8], Kennedy [1], Luckey [8], Matviyevskaya and Tllashev [6] (39-40), Matviyevskaya and Sokolovskaya [1] (35-40), al-Nabulusi [1], Qary-Niyazov [2] (94-97, 142-144, 199-206), Qurbani [2], Rosenfeld [6], [20] (SeT), [55] (ENWC), Sayılı [18] (261-288), Suter [45] (EI), [53] (IA), Tuqan [1] (450-453), Vernet [24] (EI²), Wiedemann [86], Yushkevich and Rosenfeld [1], [5] (DSB), [7]. Collection of papers: "Al-Kāshī" [1]. On astronomical computers invented by al-Kāshī: Kennedy [1-4, 11].

HS1. [Letter to his Father on the Samarkand Scientific School] P. Edition: Tabatabai [1]. Arabic translation: al-Damardash [4]. English translation: Kennedy [12], English and Turkish translations: Sayılı [19]. Russian translations by Babayev and Sobirov: Sobirov [9] (183-208); D. Yusupova [1] (45-64). Research: Tabatabai [1], D. Yusupova [1]. Letter was written in 1427.

HS2. [Another letter to his Father on the Samarkand Scientific School, recently found in Iran]. Research: Bagheri [2]. English translation: Bagheri [3].

M1. Key of Arithmetic (Miftāḥ al-ḥisāb) = Key of Reckoners on the Science of Arithmetic (Miftāḥ al-ḥussāb fī `ilm al-ḥisāb) - Aligarh (Azad `Abd al-Ḥayy 67), Berlin (5992-5991a; IGMN I, 2), Cairo (Ṭal`at riyāḍa 134), Calcutta (Buhar 341), Hyderabad (jadid 2290; Sa`id riyāḍa 2), Istanbul (NO 2967; SM Yeni Cami 804; TK 3243, 3479), Jerusalem (Yehuda 805), Leiden (185), London (419, Ind. 756), Mashhad (5229-5231; Nawwab

27), Paris (5020), Patna (798, 1652, 2027, 2418-2419, 2854), Peshawar (1687), Princeton (Yehuda 1189), Rampur (65-67, 418, 652), St. Petersburg (Nat. 131), Tehran (33, 2977; Univ. 866-868). Persian translation of Book II: Tashkent (2245/8).
Description of the Berlin manuscripts: Ahlwardt [1] (342-344). Facsimile edition of the Leiden manuscript with Russian translation by Rosenfeld and commentary by Yushkevich and Rosenfeld: al-Kāshī [6] (9-262, 428-568). Edition: al-Kāshī [2]. Edition with commentary by al-Damardash and al-Hafni: al-Kāshī [8] (commentary as based on commentary in al-Kāshī [6]). Edition with commentary by al-Nabulusi: al-Kāshī [10]. Russian translation of the St. Petersburg manuscript by Rosenfeld: al-Kāshī [5] (13-326).
Research: Borho [2] (amicable numbers), Bretanitskiy and Rosenfeld [1] (chapter on architecture), Bruins [2-3] (solution of equations), Dold-Samplonius [14-16, 17a, 23, 24] (chapter on architecture), Ja`fari Naini [1] (56-57) (amicable numbers), Luckey [6] (extraction of roots and binomial formula), [7] (general research), Matviyevskaya and Tllashev [6] (126-127), al-Nabulusi [2-3], Struik [2] (decimal fractions), Woepcke [15] (summation of series of cubes), Yushkevich and Rosenfeld - al-Kāshī [5] (380-439), [6] (324-367).
The work in 5 books: 1) arithmetic of integers, (contains extraction of roots of any power and binomial formula), 2) arithmetic of fractions, 3) arithmetic of astronomers (sexagesimal fractions and sexagesimal record of integers), 4) geometry (including determining volumes by weights - with table of specific weights, and measuring of arcs, vaults, cupolas, and stalactite surfaces), 5) algebra, is dedicated to Ulugh Beg (No 816).

M2. Concise Exposition of "Key" (Talkhīṣ al-miftāḥ) - Aligarh (Azad `Abd al-Ḥayy 71, 74, Subh. Sup. 511/3), Baghdad (2933), Cairo (riyāḍa 306), Istanbul (SM Carullah 1460), London (Ind. 757), Kazimiya (Mahfuz 156, 166), Mosul (132, 186/32, 274/50), Patna (2618/3), Tabriz (241), Tashkent (2245/7), Tehran (2785/9, 2827/1; Univ. 866-868). Treatise in 30 chapters.

M3. Treatise on Circumference (al-Risāla al-muḥīṭiyya) - Istanbul (AM 756), Mashhad (162), Tehran (642/4).
Edition: in the collection al-Kāshī [1]. Edition of the Istanbul manuscript with German translation by Luckey: al-Kāshī [4], Photo-reproduction of the Istanbul manuscript with Russian translation by Rosenfeld: al-Kāshī [6] (263-308, 338-426). Russian translation by Rosenfeld: al-Kāshī [5] (327-379). Research: Luckey - al-Kāshī [4], Yushkevich and Rosenfeld - al-Kāshī [6] (367-375), G. Yusupova [5]. Research of a Byzantine manuscript containing decimal fractions appeared in this treatise and obtained by the Byzantines in Istanbul from the work (No 845, M1) of al-Qushjī: Hunger and Vogel [1].
Calculation of approximate value of (z) by calculation of perimeters of inscribed and circumscribed regular polygons with ($3\cdot 2^{28}$) sides. Calculation is based on the rule ${c_{i+1}}^2= =r(2r+c_i)$ where (c_i) is the chord of supplement of ($3\cdot 2^i$th) part of circumference to the half-circumference, ($c_0=r$) is the radius of the circle. The number of sides is chosen from the condition for difference between perimeters of inscribed and circumscribed polygons for a great circle of the sphere of fixed stars would be less than the thickness of a horse hair. The calculation is made in sexagesimal fractions, the result is also transformed into decimal fractions introduced by al-Kāshī in this treatise, the last value has 17 right digits.

M4. Treatise on Chord and Sine (Risāla al-watar wa'l-jayb). Title is mentioned in KZ (III 364), the second - in M1 (see al-Kāshī [6], 9). Edition: al-Kāshī [1]. Exposition (No 940, A1) by Mirim Chelebi: French translation - L. Sedillot [9] (330-350), Russian translation by Rosenfeld - al-Kāshī [6] (311-319). Research: Aaboe [1], R. Ibadov [1-2], Sirajdinov [1], Yushkevich and Rosenfeld: al-Kāshī [6] (375-380).
Calculation of sin 1^o by solution of the cubic equation $4x^3 + q = 3x$ where $x = \sin 1^o$, $q = \sin 3^o$ by following iteration process: $x_1=\frac{q}{3}$, $x_2=\frac{q+4x_1^3}{3}$ . . . , $x_{i+1}=\frac{q+4x_i^3}{3}$.

M5. Kinds of Operations of Multiplication by Board and Dust (Wujūh `amal al-ḍarb fi'l-takht wa'l-turāb). Edition: in al-Kāshī [1].

M6. [Notes on Linear Interpolation] - Cairo (Zaki 917/14).

M7. [4 Mathematical Treatises] - Tehran (Mahdawi 482/8-11).

A1. Khaqan Zij - Improvement of the Ilkhanid Zij (Zīj-i Khāqānī dar takmīl-i zīj-i īlkhānī) P - Cairo (riyad 898/23 - a fragment, Ṭal`at majlis 515/2 - Part II, Taymur riyāḍa 149), Hyderabad (riyāḍa 323), Istanbul (SM AS 2692), Jaipur (9), Leiden (14 - a fragment), London (Ind. 2232), Mashhad (202), Tehran (2454/2; Malik 5898; Mahdawi 281/3; Milli 1742, 2400; Senat 7581; Univ. 3053, 4461, Adab. 454, Ilah. 66, 888/1, Hukuk 58), Yazd (Jami` 385/4).
Description: SIAT (127-128). English translation of geographical tables: Kennedy and Kennedy [2] (3-35). Research: Hamadanizadeh [1], Kennedy [18] (calendar), [38] (horoscopes), [42], [52] (determination of the

ascendant), Kennedy and Debarnot [1], Kennedy and Kennedy [2] (geographical tables), Tichenor [1] (planetary tables).
PL (II 67) attributes this Zij to Ulugh Beg (No 816), A. Ahmedov [32] proved that this Zij was written in Samarkand.
A2. Zij of al-Kāshī (Zīj al-Kāshī) - Mashhad (5321).
Al-Kāshī was one of the authors of "Zij of Ulugh Beg " (No 816, A1).
A3. Arabization of Zij (Ta`rīb al-zīj) - Cairo (Ḥalīm mīqāt 8, Taymūr riyāḍa 302 - introduction), Leiden (2537), Tashkent (2123). Arabic translation of "Zij of Ulugh Beg" (No 816, A1).
A4. Ladder of Heavens of Solution for Difficulties met by Forerunners in Determining Distances and Volumes [of Celestial Bodies] (Sullam al-samā fī ḥall ishkāl waqa`a li'l-muqaddimīn fī'l-ab`ād wa'l-ajrām) - Istanbul (BU Veliyuddin 1324/5; SM Esat 2034/3), London (Ind. 755), Mashhad (5329, 5540), Oxford (I 888/4), St. Petersburg (Nat. ANS 600/1), is described in KZ (III 610). Treatise in 7 books: 1) premises, 2) distance of the Moon, 3) distance of the Sun, 4) distance of the higher sphere, 5) distances of planets, 6) distances of fixed stars, 7) volumes of celestial bodies; written in Kashan in 1407 and dedicated to vizier Kamal al-Dīn Mahmud.
A5. Essence of Gardens, Explanation of Disc of Belts, That Is, Plate by Means of Which Ephemerides of Seven Planets Are Determined, and of The Instrument "Board of Conjunction" (Zubda al-ḥadāiq - Sharḥ ṭabaq al-manāṭiq wa-huwa ṣafḥa tu`rifu minhā taqāwim al-kawākib al-sab`a wa ālа lawḥ al-ittiṣālāt) = Delight of Gardens, on Property of the Construction of Instrument Called "Disc of Belts" (Nuzha al-ḥadāiq fī kayfiyyat san`at al-āla al-musammāt bi ṭabaq al-manāṭiq) - Dublin (3640/2), London (Ind. Ross 210), Madras (Firuz 20/2), Tehran Mahfuz 25). Edition: appendix to the book al-Kāshī [2]. Facsimile edition of anonymous Persian exposition in the manuscript Princeton (Garr. 75) with English translation: Kennedy [11]. Research: Kennedy [10] (164-243). Description of the instrument "disc of belts" invented by al-Kāshī for determining the coordinates of celestial bodies and their distances from the Earth.
A6. Treatise on the Construction of the Astrolabe (Risāla dar sākht-i asṭurlāb) P - Mashhad (84).
A7. Supplement to "Delight" (Ilḥāqāt al-Nuzha). Edition: in al-Kāshī [1], is mentioned in KZ (VI 324-325).
A8. Consequences of Truths (Natā'ij al-ḥaqā'iq). Edition in al-Kāshī [1] .
A9. Treatise on Determining the Azimuth of Qibla by Indian Circle (Risāla fī ma`rifat samt al-Qibla min dā'ira hindiyya ma`rūfa) - Mashhad (84).
A10. Key of Causes in the Science of Zijes (Miftāḥ al-asbāb fī `ilm al-zījāt) - Mosul (120/306).
A11. Gift to Sultan on Causes of the Science [of Zīj] (Tuḥfat al-sulṭān fī asbab al-`irfān) - Oxford (1514). Treatise on astronomy dedicated to Amír-zade Ibrāhīm Sultan, son of Shahruh.
A12. Treatise on Explanation of Instruments of Observation (Risāla dar sharḥ-i ālāt-i raṣad) P - Leiden (V 327/12), Tehran (Univ. Adab. 150/4), is quoted in KZ (I 399). Editions: Barthold [2] (pers. 1-24), Kennedy [12] (99, 101, 103). English translation: Kennedy [12]. Russian translation: Shishkin [1] (91-94). Treatise is dedicated to Amir-zade Sultan Iskandar Bahadur, nephew of Shahruh, the ruler of Isfahan, or to Iskandar, the future Karakoyunlu ruler in Azerbaijan.
A13. Treatise on Astronomy (Risāla dar hay'at) P - London (Sup. 27261), Yazd (Jamí` 439/5).
A14. Concise [Treatise] on the Science of Astronomy (Mukhtaṣar dar `ilm-i hay`at) P - London (869b). Treatise is dedicated to Amir-zade Sultan Iskandar Bahadur, nephew of Shahruh.
A15. Treatise on Solution of Propositions on Mercury (Risālat ḥall ashkāl `Uṭārid) - Mashhad (5527).
A16. Treatise for Kamal al-Dīn (Risāla-yi Kamāliyya) P - Hyderabad (riyāḍa 125-126). Astronomical treatise in 7 books plus conclusion, written in Kashan in 1406; dedicated to vizier Kamal al-Dīn Mahmud.
A17. Treatise on Closer Definition of the Center of the Moon under Observations of Eclipses (Risāla fī taṣḥīḥ awsaṭ al-qamar min al-arṣad al-khusūfiyya) - Cairo (riyāḍa 898/23).

803. NI`MATALLAH AL-KIRMANI

Ni`matallāh Kirmānī (d. 1431), from Kerman, Iran, mathematician, teacher of (No 804), Quṭb al-Dīn Husraw-Shāh.
See: MAMS (II 486).

804. QUTB AL-DIN HUSRAW-SHAH

Quṭb al-Dīn Husraw-Shāh (15th c.), Iranian mathematician, pupil of (No 803), al-Kirmānī.

See: MAMS (II 486), PL (II 8).

M1. Essence of Arithmetic (Khulāṣat al-ḥisāb) - Mashhad (5278-5279, 5498-5499, 8214). Persian version: Mashhad (49-50, 5276-5277, 5280-5281, 7633, 7640), Tehran (3546/3, 4749). Treatise in 2 books plus introduction and conclusion, contains questions and answers in arithmetic and geometry.

M2. Measurement (Misāḥa) - Tehran (Univ. 3025).

A1. [Treatise of] Ghiyath al-Dīn (Ghiyāthiyya) P - Cairo (riyāḍa 347), Mashhad (Mawlawi 510/2), Tehran (Senat 2253/1).

805. HUSAYN AL-KHWARIZMI AL-KUBRAWI

Ḥusayn ibn al-Ḥasan al-Khwārizmī al-Ḥusaynī al-Kubrawī (d. 1435), astronomer, worked in Samarkand.

See: MAMS (II 486), PL (II 50, 73), STMI (314).

A1. Delight of Possessors [of the Book] on the Form of Celestial Spheres (Nuzhat al-mu'allāk fī hay'at al-aflāk) - Tashkent (1207/3). Description of the manuscript: SVR (I 232). Treatise was written for Ulugh Beg's (No 816) son `Abd al-`Azīz.

A2. Commentary on "Compendium" (Sharḥ-i Mulakhkhaṣ) P - London (1524), Oxford (1524), Tehran (140). Commentary on the work (No 547, A1) of al-Jaghmīnī, written for Ulugh Beg (No 816).

806. MUHAMMAḌ-SHAH AL-FANARI (FENARİ)

Mawlānā Muḥammad-shāh Chalabī ibn al-Mawlā Shams al-Dīn al-Fanārī (d. 1435), Turkish philosopher; son of al-Mawlā Muhammed Hamza al-Fanārī, the first sheikh al-Islām of the Ottomans; when he was eighteen years old, he became a teacher at the Edirne madrasa and was professor at the Bursa madrasa when he died. Wrote a commentary on his father's work (Unmūdhaj al-`ulūm) (OM, III, 15). Brockelmann states that this work belongs to him not to his father. Uzunçarşılı is also of the same opinion, however Taşköpri-zade and other Ottoman biography writers ascribe this work to his father. (OM, III, 15; HA, II, 187-190; K2, I, 184).

See: GAL[2] (II 329), MAMS (II 486-487); Farmer [4] (61).

E1. Specimen of Sciences (Unmūdhaj al-`ulūm) - Istanbul (Selim 897), Jerusalem (Khalid. 73/16), Mosul (43/2, 7), Vienna (11). Description of the Vienna manuscript: Flügel [6] (11-12). Research: Seybold [3]. Exposition of 100 sciences, including: 62) astronomy, 66) geometry, 67) mechanics, 68) military devices, 69) measurement, 70) number theory, 71) multiplication, 72) algebra, 73) Hindu arithmetic, 74) finger reckoning, 75) spherics, 76) movement of the sphere, 77) optics, 78-79) astrology, 80) astrolabe, 81) quadrants.

807. `ABD AL-QADIR AL-MARAGHI

`Abd al-Qādir ibn Ghaybī al-Ḥāfiẓ al-Marāghī (1353-1435), born in Maragha, musician and theoretician of music, worked in Tabriz, Baghdad, Ankara (under Sultan Beyazıd I (1389-1402), Samarkand (under Timur), and Herat (under Shahruh); died in Herat.

See: KZ (II 507, III 413, VI 255), MAMS (III 369), PL (II412-413); Aghayeva [1-3], Farmer [7, 9], Kerimov and Aghayeva [1].

HS1. [Autobiograhy in verses] - Istanbul (TK 3470 - at the end of the manuscript of Mu1. Russian translation: Kerimov and Aghayeva [1] (121-126).

Mu1. Commentary on "[Book of] Cycles" (Sharḥ al-Adwār) - Istanbul (NO 3651; TK 3470). Commentary on the work (No 641, Mu1) of al-Urmawi.

Mu2. Ten Uses (Fawā'id `ashara) - Istanbul (NO 3651).

Mu3. Aims of Melodies (Maqāṣid al-alḥān) - Hyderabad (riyāḍa 320), Istanbul (TK 26), Leiden (1426), Madras (520), Paris (913/1). Research: Kosegarten [1] (I 35-40). Treatise in 12 chapters, dedicated to Ottoman Sultan Murad II (1421-1451).

Mu4. Collection of Melodies (Jāmi` al-alḥān) - Istanbul (NO 3644-3645, 3651, 3656), Oxford (1842), Paris (2411). Treatise is dedicated to Shahruh ibn Tīmūr.

808 QAZI-ZADA AL-RUMI (KADI-ZADE)

Ṣalāḥ al-Dīn Mūsā ibn Muḥammad ibn Maḥmūd Qāḍī-zāda al-Rūmī (ca 1440), born in Bursa, Turkey, (hence his name al-Rūmī, from the Arabic name al-Rūm for the Byzantine and Ottoman empires), his father's name was Muḥammad ibn al-Qāḍī Maḥmūd al-Bursawī al-Rūmī (Qazi is the Persian and Turkish form of the

Arabic word qāḍī = judge; zāda is the Arabic transcription of the Persian word zāde = son). Both his father and grandfather were judges. Al-Rumi was brought from Bursa to Samarkand by Tīmūr, he worked and died in Samarkand; was teacher of Ulugh Beg (No 816) in astronomy and one of the heads of the Samarkand observatory. He was buried by Ulugh Beg in the mausoleum of Shah-i-Zinda (Living King) in Samarkand.

See: GAL (II 275), GAS (V 114-115), KZ (I 322, 384, II 387, 402, 559 VI 113, 474), MAA (174-175), MAA[3] (175), MAMS (II 487-489), OALT (5-21), OMLT (3-18), PL (II 8), SSM (157-158), STMI (357, 418); De Young [13] (ENWC), Dilgan [8] (DSB), Matviyevskaya and Sokolovskaya [1] (32-35), Sayılı [18] (261-274), Tuqan [1] (454-457).

E1. Commentary on "Wisdom of Source" (Sharḥ Ḥikmat al-`ayn) - commentary on the encyclopaedical treatise (No 616, E1) of al-Qazwīnī, the manuscripts are usually located together with manuscripts of the treatise of al-Qazwīnī.

M1. [Revision of Euclid's "Elements"] - Florence (280/2).

KZ (I 384) informs that this revision contained only Books I-VII.

M2. [Gift of the Chief] on Commentary on "Substantional Propositions" ([Tuḥfat al-Ra'īs] Sharḥ Ashkāl al-ta'sīs) - Alexandria (funūn 106/3, ḥisāb 30), Baghdad (2941-2943, Sup 320/2; Rajab 107/1), Baku (B 488/3, 4, 2315, 2450, 3950), Berlin (5943-5944, oct 3603), Cairo (riyad 98, 640-643, Ṭal`at majlis 502/2, Taymūr riyāḍa 143; Azhar VI 162), Calcutta (Buhar 342), Cambridge (102, 591/20), Dublin (Beatty 3649/2, 5139/2, 5496/1), Escorial (II 952), Fas (Zawiya 9m, 13a), Gotha (1498-1499), Hyderabad (riyāḍa 54; Salar riyāḍa 15), Istanbul (BU Veliyuddin 2321, 2324; SM 845, AS 2712/2, Carullah 1058/9, Selim 742; TK 7038/3, 8693/8, 8707/7, 8831/2), Jerusalem (Yehuda 426), Leiden (2822, 2833/1), London (186, 388, Sup 753/4, 754/5, 765/5), Mashhad (5353, 7733, Univ 198), Mosul (242), Paris (2475, 6289, 6571), Peshawar (1648), Princeton (Garr 3058-3059; Yehuda 359, 652, 1040, 2896, 4443, 4588, 4632), Kazan (97, 106), Rampur (I 35/8), Rome (Vat Sbath 820), St. Petersburg (Nat 133/3, Khan 241/2), Tabriz (Tarbiyat 16), Tashkent (133/3, 241/2), Tehran (3349/1; Milli 582/8; Mahdawi 378/1), Vienna (1021/1, 1310/2). The complete list is given in OMLT. Edition: al-Samarkandī [1]. Research: De Yung [15]. Commentary on the work (No 655, M2) of al-Samarkandī.

M3. Treatise on Explanation of Determining the Sine of One Degree by Operations Based on Rules that are Based on Arithmetic and Geometric by Principles of the Method of Ghiyāth al-Dīn al-Kāshī (Risāla dar bayān-i istikhrāj-i jayb-i yak daraja) P - Berlin (339). Exposition: in (No 940, M1) by Mirim Chelebi. Commentary on the treatise (No 802, M4) of al-Kāshī. Al-Rumi is often regarded as the author of the treatise (No 816, M1) of Ulugh Beg.

M4. Rules of Operations and Correction of Tables (Dastūr al-`amal wa taṣḥīḥ al-jadwal) P - Tbilisi (49/84). Treatise with the same title containing exposition of treatise (No 802, M4) of al-Kāshī was written by al-Rumi's grandson Mirim Chelebi (No 940, A1). Exposition in (No 938, M4) by al-Birjandi who ascribed this treatise to Ulugh Beg (No 816).

M5. Treatise of Salah al-Dīn on Arithmetic Rules (al-Risāla al-Ṣalāḥiyya fī'l-qawā`id al-ḥisābiyya) = Treatise on Arithmetic (Risāla fī'l-ḥisāb) - - Istanbul (SM Şehit 1992/1). The complete list is given in OMLT. Treatise was written in Bursa in 1383.

M6. Treatise on Arithmetic (Risāla dar ḥisāb) P - Mashhad (94).

M7. Treatise on Measurement (Risāla fī'l-misāḥa) = Measurement (Misāḥa) P -Cairo (Fāḍil maj 116/9), Mashhad (Mawlawi 557/1) Esad Efendi (2023/2). The complete list is given in OMLT

AM1. Treatise on Astronomy and Geometry (Risāla fī'l-hay'a wa'l-handasa) - Bursa (Inc Bey 25).

A1. Commentary on al-Jaghmīnī (Sharḥ al-Jaghmīnī) = Commentary on "Compendium on Astronomy" (Sharḥ al-Mulakhkhaṣ fī'l-hay'a) -Alexandria (ḥisāb 39-41; Mun. 2821), Aligarh (Azad. `Abd al-Ḥayy 656/23, 666/43, 670/47, Habib 44/13a-14, Subh. 520/1) Sul. 170/30), Ashqabad (1721), Baku (B 33, 103, 148, 603, 1921/1, 1956, 2403, 3516, 3863/1, 4403/1, 4411, 5640, 5757; Univ. 39). Beirut (189-192), Berlin (5675, 5676a-e), Bologna, Bombay (20/1), Cairo (abdah 21, falak 3957/1, 4525, 8534, hay'a 8-9, 23-24, Fāḍil hay'a 3-4, Ḥalīm mīqāt 2, Kavala hay'a 2/1, 5, Ṭal`at majlis 966/3, Taymūr riyāḍa 78; 120, 143-143a, 338/1). Calcutta (Buhar 349), Copenhagen (84), Dhaka (521), Dresden (131), Dublin (3649/5), Escorial (II 957-958), Hyderabad (jadid 2684, 4508, riyāḍa 180. 335; Osm. 520; Said. hay'a 17; Salar hay'a 14-22, 28/1), Isfahan (631, 652), Istanbul (NO 2936-2937, 2952-2953, SM Aşir Hafid 2031, Laleli 2134, 2129, Fatih 3501-3507, 3403, 3404, 30406, Raşid Efendi 1221/1, Ayasofya 2662, 2657, 2969/1, 2661, 2658), Jerusalem (Yehuda 691), Kabul (Muza 117), Kazimiya (Mahfuz 241), Leiden (202/3, 234/4 297/1), London (401/2, 1341, Sup. 760/1, 761/1; Ind. 751-753), Lucknow (C 335), Madras (III 242), Mahachqala (179-180, 458, 914), Manchester (Lind. 353), Mashhad (Farhang 21/1, Gauharshad 392/2, 829, 1003, 1032, 1565; Univ. 355-356), Munich (854), New Haven (1479), Oxford (I 967, 1024, II 276, 291/4), Paris (2503-2504, 4316, 6384), Patna

(2056, 2440-2441), Princeton (975-977, Yehuda 896, 1088, 1131, 2840, 2987, 3171, 4136, 4593, 4744). Kazan (1057, 1067/1), Rampur (hay'a 52-56), Rome (Vat. Sbath 816), St. Petersburg (A 311/2, 645/2, 1061/1, B 811-813, 1302/2, 1330, 1450/1, 1640, 1904, 4262/1, C 616, 1362, 1535/1; Nat. 127, 133/1; Univ. 397), Tashkent (1341, 2655/2, 2984/4, 3049/1, 3935/2, 5607, 5619/1, 6627, 7262, 7376/1, 7672, 8217, 8392, 8947/3, 9346/2, 9592, 9787/2), Tbilisi (L 260, 268), Tehran (194-195; Mahdawi 277/11-12, 362/2), Tripoli (Um. 1118). In addition to those stated above, 291 manuscript copies are mentioned in OALT.

Description of the Cairo manuscripts: Sayyid [1] (55-56). Description of the Escorial manuscripts: Derenbourg [7] (93). Description of the Tashkent manuscript 1341: SVR (I 227), Edition: al-Jaghmīnī [1], al-Rumi [1]. Research: Bulgakov [17], Masharipova [1], Pashayev [1]. Commentary on the work (No 547, A2) of al-Jaghmīnī.

A2. Super-commentary on the Work of Almagest (Ḥāshiya ʿalā kitāb al-Majisṭī) = Commentary on "Exposition of Almagest" (Sharḥ Taḥrīr al-Majisṭī) - Berlin (5657), London (Ind. 754). Description of the Berlin manuscript: Ahlwardt [1] (144-145). Commentary on the work (No 606, A1) of al-Ṭūsī.

A3 Commentary on "Memoir" (Sharḥ al-Tadhkira) – Samarkand; Research: Atayev [1]. Commentary on the work (No 606, A10) of al-Ṭūsī.

A4. Treatise on the Science of Astronomy (Risāla fīʿilm al-hay'a) - St. Petersburg (C 1062/12).

A5. Treatise on the Sine Quadrant (Risāla fī'l-rubʿ al-mujayyab) - Mashhad (5328, 5357, 6530; Gauharshad 1774/3), St. Petersburg (A 686/11), Tehran (Malik 3442; Sipahsalar 698/6, 3677/6; Univ. 3371/10).

A6. Treatise on the Sine [Quadrant] (Risāla al-jayb) - Istanbul (SM Çorlulu 342, Hasan Hüsnü 1284).

A7. Why is it Admitted that the Greatest Height of Mountain is to the Diameter of the Earth as One Seventh of Harley Corn to Cubit (Limā kāna ḥall kawn nisbat irtifāʿ aʿẓam al-jibāl ilā quṭr al-arḍ ka-nisbat subʿ ʿarḍ shaʿīra ilā dhirāʿ) - Berlin (5948). Description of the manuscript: Ahlwardt [1] (322).

A8. Treatise on the Azimuth of Qibla (Risāla fī samt al-Qibla) - Bursa (Ine. Bey 12).

A9. Treatise on the Determining the Meridian (Risāla fī istikhrāj khaṭṭ niṣf al-nahār) - Cairo (Fāḍil majlis 116/10).

A10. Treatise on the Determining the Meridian Line and Azimuth of Qibla (Risāla fī istikhrāj khaṭṭ niṣf al-nahār wa samt al-Qibla) - is mentioned in OALT.

A11. Treatise on Operations with the Almucantar Quadrant (Risāla fī'l-ʿamal bi rubʿ al-muqanṭarāt) - Cairo (Fāḍil majlis 180/6).

809. AHMAD AL-DAʿI

Aḥmad ibn Ibrāhīm ibn Muḥammad al-Dāʿī (15th c.), Turkish astronomer, translator of the works (No 606, A16 and A17) of al-Ṭūsī into Turkish.

See: OALT (2-5).

A1. Tarjama-i Sī Fasl- Cairo (Ṭalʿat mīqāt 133/4, Falak 40/2), Istanbul (BU 4604/1, SM Laleli 2735, İ. U. TY. 9807/1, 1366, NO 4912, Kandilli 132/6, 478, 388/2) In addition to those stated above 23 manuscript copies are mentioned in OALT.

A2. Tarjama-i Mukhtaṣar dar Maʿrifat al-Taqwīm- Istanbul (SM Reisülküttab 582/3)

810. AHMAD AL-MAQRIZI

Taqī al-Dīn Abū'l-ʿAbbās Aḥmad ibn ʿAlī ibn ʿAbd al-Qādir ibn Muḥammad al-Ḥusaynī al-Maqrīzī (d. 1441), jurist, historian, geographer and mathematician.

See: GAL (II 47-50), GAL² (II 36-38), MAMS (II 489), SSM (77); Noskowyj [1].

Me1. Treatise on Names of Legal Measures and Weights (Risāla fī asmā' al-awzān wa'l-makāyil al-sharʿiyya) - Cairo (Ṭalʿat riyāḍa 144/1), Leiden (1014). Description of the Cairo manuscript: Sayyid [1] (52).

G1. [Topographical and Historical Description of Egypt]. French translation: of parts 1-2 by Urbain Bouriani, of parts 3-4 by Paul Casanova - al-Maqrīzī [1].

G2. Book on new Rarities from the Marvellous Information on Valley of Hadramawt (Kitāb al-ṭurfa al-gharība min akhbār wādī Ḥadranawt al-ʿajība). Edition with Latin translation: Noskowyj [1].

G3. Book of Notification in Respect to Localities and Traces (Kitāb al-mawāʿiẓ wa'l-iʿtibār fī dhikr al-khiṭaṭ wa'l-āthār). Edition by Wiet: al-Maqrīzī [2].

811. HIBATALLAH AL-HUSAYNI

Hibatallāh ibn `Aṭā'allāh al-Ḥasanī al-Ḥusaynī al-Shirāzī "Shāh Mīr" (15th c.), born in Shiraz, came to Gujarat in 1492; philosopher, theologian, and astronomer.

See: MAMS (III 44), STMI (313).

A1. Commentary on Treatise on Astronomy of `Alī Qushjī (Sharḥ-i Risāla-yi hay'at-i `Alī Qūshjī) - Berlin (332/1), Hyderabad (riyāḍa 133), Madras (Firuz 62). Commentary on the work (No 845, A1) of al-Qushjī.

812. ABU BAKR IBN AL-MUSHRIF

Zayn al-Dīn Abū Bakr ibn Ismā`īl ibn al-Mushrif (15th c.), Egyptian astronomer.

See: GAL² (I 869), MAMS (III 17), SSM (66).

A1. Light of the Pupil by the Knowledge of the Construction of the Celestial Spheres on Usual Horizons (Nūr al-aḥdāq bi-ma`rifat `amal al-aflāk fī sā'ir al-āfāq) - Cairo (mīqāt 468/3, 512 - anonymous, riyāḍa. 85), Istanbul (NO 2461), Rome (Vat. Sbath 358/1).

A2. [Tables of Normed Right Ascensions] - Cairo (Fāḍil mīqāt 209/1).

813. MUHAMMAD IBN AL-`ATTAR

Abū `Abdallāh Muḥibb al-Dīn (Majd al-Dīn) Muḥammad ibn Muḥammad ibn Aḥmad ibn al-`Aṭṭār al-Bakrī (15th c.) (ibn al-aṭṭār = son of a perfumer), belonged to the Wafaiyya mystic sect; pupil of al-Majdī (No 815); astronomer, worked in Damascus.

See: GAL (II 157-158), GAL² (II 158), MAA (175), MAMS (II 489-490, III 36), SSM (74-75), STMI (334), TIFI (202-203).

A1. Removal of the Veil on the Construction of Quadrants (Kashf al-qinā` fī rasm (waḍ`) al-arbā`) - Cairo (falak 3815/5, mīqāt 118, 124/1, 173/1, 442, 491, 515, 640/2, 1220, Fāḍil mīqāt 153), Damascus (3091, 3104), Istanbul (NO 2945), Jerusalem (Khalid. 23), London (Sup. 753/5), Paris (2546/1), Patna (2469/4), Rampur (I 65), Rome (Vat. Borg. 105/1). Treatise was written in 1465.

A2. Delight on Planets (al-Nuzha al-naḍḍāra bi'l-kawākib al-sayyāra) - Manchester (361/M).

A3. Sections on the Knowledge of the Position of Half-Diameter and Distance from the Center of Almucantars (Fuṣūl fī ma`rifat al-mawkī` wa niṣf al-quṭr wa bu`d al-markaz li'l-muqanṭarāt) - Cairo (Ṭal`at mīqāt 185/2 - anonymous, but A1 is mentioned as the work of the same author), Patna (2469/3).

A4. Tables (al-Jadāwil) - Patna (2469/6). Revision of tables of al-Farghānī (No 67).

A5. Treatise on Knowledge of the Positions of the Columns of Ka`ba from Four Sides (Risāla fī ma`rifat mawāḍi` arkān al-Ka`ba min al-jihāt al-arba`) - Patna (2469/13).

A6. Treatise on Astrolabe (al-Risāla fī'l-asṭurlāb) - Patna (2469/14).

A7. Continuation to "Supplies of the Traveller" (Dhayl Zād al-musāfir) - Patna (2469/5). Continuation of the work (No 815, A2) of Ibn al-Majdī.

A8. Commentary on Versed Treatise on the Knowledge of Finding Qibla (al-Sharḥ li'l-Risāla al-manẓūma fī ma`rifat ikhrāj al-Qibla) - Patna (2469/12). Commentary on treatise (No 815, A13) of Ibn al-Majdī.

A9. Brilliant Jewels on Operations with Almucantar Quadrant) - Jawāhir al-nayyirāt fī'l-`amal bi rub` al-muqanṭarāt) - Tripoli (T 25/1, Um. 1102/1). Treatise in 20 chapters, perhaps coincides with the treatise on "Timekeeping Jewels of Sapphires (Jawharat al-yawāqīt)" mentioned by al-Urmayūnī (No 1017).

G1. Treatise on Latitudes and Longitudes of Cities (Risāla fī `urūḍ al-bilād wa aṭwāliha) - Patna (2469/2).

G2. Determining the Direction of Qibla (Fī ma`rifat ikhrāj al-Qibla) - Patna (2469/1).

G3. Treatise on the Science of Calculation of Current Waters in the City of Damascus (Risāla fī `ilm al-ḥisāb al-miyāh al-jāriya fī madīnat al-Dimashq) - Patna (2473/1).

814. AL-MAHDI AHMAD IBN YAHYA

Al-Mahdī Aḥmad ibn Yaḥyā (d. 1437), Yemeni astronomer.

See: MAY (40).

A1. [Poem on Lunar Stations] - Berlin (5746).

815. SHIHAB AL-DIN IBN AL-MAJDI

Shihāb al-Dīn Abu'l-`Abbās Aḥmad ibn Rajab ibn Tībughā "Ibn al-Majdī" (1365-1447), Egyptian mathematician and astronomer.

See: GAL (II 158-159), GAL^2 (II 158-159), IHS (III 1528-1529), KZ (I 248, II 581, III 233, 528, V 205), MAA (175-177), MAA^2 (178), MAMS (II 490-492, III 369), SSM (72-74), STMI (359, 387-388); King and Kennedy [1], Tuqan [1] (458).

M1. Opening Truths on Arithmetic of Degrees and Minutes (Kashf al-ḥaqā'iq fī ḥisāb al-daraj wa'l-daqā'iq) - Algiers (1456), Budapest (02), Cairo (mīqāt 751/2, 775/2 - fragments, riyāḍa. 356, Fāḍil riyāḍa. 37), Istanbul (SM Laleli 2723/3), Oxford (I 1023/1). Treatise in 2 chapters plus conclusion.

M2. New Arithmetic Questions (al-Mubtakarāt al-ḥisābiyya) - Cairo (`aqā'id 3964/2, 10), Escorial (I 948/3).

M3. Enveloping the Core - Commentary on "Concise Exposition of Arithmetic" of Ibn al-Bannā (Ḥāwī al-lubāb wa sharḥ Talkhīṣ Ibn al-Bannā fī'l-ḥisāb) - Baghdad (2934), Cairo (falak 6829/1, mīqāt 440/1, riyāḍa. 356 - a fragment, 554), Hyderabad (Osm. 1050), Istanbul (SM Laleli 2781). Commentary on the work (No 696, M1) of al- Bannā.

M4. Cyclic Establishment Having Place for Two (al-Iqrār al-dawrī idhā kāna li-ithnayn) Cairo, (`aqā'id 3964/4, 11).

M5. Complicate Problems (Masā'il fī'l-murakkabāt) - Cairo (`aqā'id 3964/9). Treatise on complicate problems of inheritance.

M6. Use of the Knowledge of Dirham, Dinar, [Dinar] Ashrafi, and Mithqāl (Fā'ida fī ma`rifat al-dirham wa'l-dīnār wa'l-ashrafī wa'l-mithqāl) - Cairo (`aqā'id 3964/4, mīqāt 56, 125/1, Zaki 490/2).

M7. [Notes on Interpolation] - Cairo (Zaki 917/4).

A1. Guide to the Right Path for the Perplexed in Drawing [Lines] of Surplus of Turn (Irshād al-ḥā'ir ilā takhṭīṭ faḍl al-dā'ir) - Berlin (5688), Cairo (mīqāt 173/6. 684-685, Fāḍil mīqāt 2-3, 198/3, Khalīl mīqāt 11, Ṭal`at mīqāt 104), Istanbul (SM AS 2673/3), Leiden (187c/1), Rabat (452/10), Tunis (Nat. 18158). Description of the Berlin manuscript: Ahlwardt [1] (168-169). Description of the Leiden manuscript: Ruska and Hartner [1] (201). Treatise on drawing horary lines on the sundial in 3 parts: 1) on horizontal sundials, 2) on vertical sundials, 3) on oblique sundials.

A2. Supplies of the Traveller for Drawing Lines of Surplus of Turn (Zād al-musāfir fī rasm khuṭūṭ faḍl al-dā'ir) - Algiers (1457/2), Berlin (5689), Cairo (mīqāt 175/1, 521/11, 534/1, 639/1, 714, 940/1, 967, Fāḍil mīqāt 67/2, 130-131. 197/1, 201/2), Escorial (963/3), Oxford (I 1023/5, II 286/1), Hyderabad (riyāḍa. 188), Paris (2541/4), Princeton (Yehuda 3442), Tehran (Senat 7542/1). Description of the Berlin manuscript: Ahlwardt [1] (169). Abridgement of A1 in 3 chapters.

A3. Treatise on Operations with the Quadrant on which Almucantars are Imaged (Risāla fī'l-`amal bi'l-rub` al-marsūm `alayhi al-muqanṭarāt) - Berlin (5846), Cairo (falak 3950, 4040, 4057, 4297/5, majlis 103/4a, 844/8. mīqāt 78, 176/1, 221, 440/1, 455, 457/2, 465, 483, 511/1. 524, 563, 576/2, 3, 577/1, 607. 717/2, 738/1, 748/1, 751/2, 755/2, 782/1, 783-784, 1050/3, 1059/2, 1082/5, 1093/5, 7, Fāḍil mīqāt 109-112, 171/5, 182/2, Ṭal`at mīqāt 121/3, Taymūr riyāḍa 65, 139/4, Zaki 706/8, 786/16), Damascus (11358), Escorial (I956/2), Gotha (1417/1, 1418, 1419/1, 1420), Istanbul (SM Laleli 2728/2), Leiden (991/3, 1001/14, 2815/2), Montpelier (148/7), Munich (856-858), Oxford (I 967/14, 1025/8), Paris (2547/3), Princeton (980, Yehuda 5427), Kazan (1607/3, 1703/4), Rome (Vat. Sbath 806), St. Petersburg (A 1459, B 2965/5; Univ. 830/5), Tripoli (T 25/8). Description of the Berlin manuscript: Ahlwardt [1] (257-258).

A4. Treatise of Ibn al-Majdī on Operations with the Almucantar Quadrant (al-Majdiyya fī'l-`amal bi rub` al-muqanṭarāt) - Hyderabad (Said. hay'a 25).

A5. Treatise on Operations with the Sine Quadrant (Risāla fī'l-`amal bi'l-rub` al-mujayyab) - Baku (A 55/2, B 16/4, 2315/7, 2834/4, 3262/4, 4147/5), Tripoli (T 25/4).

A6. Treatise on Quadrant [of Astrolabe] Shakāziyya (Risāla fī rub' al-shakāziyya) - Cairo (mīqāt 64/4). Research: Samsó and Catala [1].

A7. Treatise on Operations with the Truncated Quadrant (Risāla fī'l-`amal bi'l-rub` al-maqṭū`) - Kabul (Matb. 76/33).

A8. Gardens in Full Bloom on Operations with the Hidden Quadrant (al-Rawḍ al-azhar fī'l-`amal al-rub` al-musattar) - Berlin (1023/3), Cairo (mīqāt 751/1), Hyderabad (Osm. 1349), Oxford (I 1023/3). Treatise was written in 1409.

A9. Table of Equations of the Moon (Jadwal ta`ādil al-qamar) - Cairo (Fāḍil mīqāt 25-26).

A10. Pearl Necklace on Operations with the Moon (`Iqd al-durar fi'l-`amal bi'l-qamar) - Cairo (Fāḍil mīqāt 193/1). Tables of Lunar latitude and longitude.

A11. Tables of Equation of Saturn (Jadāwil ta`dīl Zuḥal) - Cairo (Fāḍil mīqāt 24, 238).

A12. Tables of Azimuths (Jadāwil al-sumūt) - Berlin (IGMN II 32).

A13. Gift to Friends on Establishment of Badhahanj and Mihrab (Tuḥfa al-aḥbāb fī naṣb al-bādhāhanj wa'l-miḥrāb) - Berlin (5690), Cairo (`aqā'id 3964/17, mīqāt 135/2, 183/2, 1093/16, Fāḍil mīqāt 177/1, Ṭal`at mīqāt 73/3), Tehran (Senat 3572/10). Description of the Berlin manuscript: Ahlwardt [1] (170). Treatise on disposal of ventilation in mosques and on determining the azimuth of Qibla.

A14. Essence of what was said on Determining the Time and Visibility of the Crescent (Khulāṣat al-aqwāl fī ma`rifat al-waqt wa ru'yat al-hilāl) - Cairo (mīqāt 183/1, Fāḍil mīqāt 193/2), Leiden (139/2), Oxford (I 1023/4), St. Petersburg (B 1029/2).

A15. Sufficient for Understanding and Method for Solution of [Problems of] Calendar (Ghunyat al-fahīm wa'l-ṭarīq ilā ḥall al-taqwīm) - Cairo (mīqāt 432, 1107/1, Ṭal`at mīqāt 82, 140), Oxford (I 982/1), Paris (2531/3).

A16. Rules for the Sun and the Moon (Dastūr al-nayyirayn) - Cairo (falak 4022, mīqāt 441, 619/1, 813).

A17. Fresh and Sweet Source on Ephemerides of the Planets and Visibility of the Crescent (al-Manhal al-`adhb al-zulāl fī taqwīm al-kawākib wa ru'yat al-hilāl) - Cairo (Fāḍil mīqāt 183/1). Research: Kennedy and King [1].

A18. Collection of useful things on Explanation of the Principles of Calendar and Nativities (al-Jāmi` al-mufīd fī bayān uṣūl al-taqwīm wa'l-mawālīd) - Amsterdam (Acad. 48/1), Cairo (mi-qat 499/4 - chapter on Syrian and Coptic calendars) - is mentioned in KZ (II 581).

A19. Book of Incomparable Pearls to Facilitate the Art of [Compiling] Ephemerides (Kitāb al-durr al-yatīm fī tashīl ṣinā`at al-taqwīm) - Cairo (mīqāt 93, 141/1, 283, 391, 392/1, 2, 405, 1017/3, Fāḍil mīqāt 25-26, 44/1, 2, 94/1).

A20. Treatise on Operations by "Book of Incomparable Pearls to Facilitate the Art of [Compiling] Ephemerides" (Risāla fi'l-`amal bi kitāb al-Durr al-yatīm fī tashīl ṣinā`at al-taqwīm) - Cairo (mīqāt 141/1, 283, 448/2 - chapter on Solar tables, 561/1, 1017/1, 3 - a fragment, Fāḍil mīqāt 94/1, Taymūr riyāḍa. 317/2), Escorial (I 956/3), Istanbul (NO 2913), Leiden (139/3).

A21. Guide to the Right Path on Principles of Problems (Irshād al-sā'il ilā uṣūl al-masā'il) - Cairo (falak 8524, mīqāt I, 55, 131/4, 1057 - incomplete, 1096), Istanbul (SM Yeni Cami 736), New Haven (1477), Princeton (Yehuda 3327, 3581), St. Petersburg (B 3687/1). Commentary on the work (No 775, A2) by al-Mariḍīnī.

A22. Facilitation and Approach to Explanation of Methods of Solution [of Problems] and Compilations of Tables (al-Tashīl wa'l-taqrīb fī bayān ṭuruq al-ḥall wa'l-tarkīb) - Cairo (falak 8524, mīqāt 131/4, Ḥalīm mīqāt 15, 16/1), Istanbul (NO 2900), Jakarta (Sup. 624), Munich (855), Oxford (I 967/3).

A23. Treatise on the Properties of Drawing by a Protractor and on Positions of Ephemerides of the Moon in Full Year for which it is Necessary (Risāla fī kayfiyyat rasm al-dastūr wa waḍ` mā yakhtāju ilayhi li-muqawwam al-qamar sanatan kāmilatan) - Cairo (mīqāt 56, 448/1, 990/2).

A24. Brilliant Stars on Operations with Problems on Periods (al-Kawākib al-muḍī`a fi'l-`amal bi'l-masā'il al-dawriyya) - Cairo (III 268).

816. ULUGH BEG GURAGAN

Mīrzā Muḥammad ibn Shāhrukh ibn Tīmūr Ulugh Beg Guragān (1394-1449), ruler of Samarkand, grandson of Tīmūr (1370-1405), son of Shahruh (1405-1447); became the ruler of the Timurid Empire in 1447-1449. He was al-Rūmī's pupil (No 808) in astronomy at the Samarkand madrasa (1417). He founded the Samarkand observatory in 1425 which was directed by al-Kāshī (No 802). He extended his patronage to men of letters and arts. He was killed by his son Mīrzā `Abd al-Laṭīf in 1449.

See: GAL (II 275-277), GAL² (II 298), KZ (II 123, 266, 290, III 197, 470, 559, VI 596), MA (157-158, 176), MAA (191, 221), MAMS (II 492-495, III 369), PL (II 67-72), SSM (157), STMI (365, 379); Abdullayev and Hikmatullayev [1] (52-57), A. Ahmedov [28, 31 b, c], B. Ahmedov [1-2], Ayupov and Matviyevskaya [1-2], Barthold [2, 9a, b, c, d], Browne [4] (385-386, 501-503), Bouvat [1] (EI), Bouvat and Köprülü [1] (IA), Bulgakov [5], Chavushi [1], Delambre [1] (204-209), Ehgamberdiev [1], Fayzullayev [8], Hasanov [7] (171-188), Hrabovski [1], Jalalov [1, 6, 10], Kenedy [51a], Lane-Poole [1] (265-268), Leonov [1-2], Masson [1], Matviyevskaya [40], Matviyevskaya and Sokolovskaya [1], Qary-Niyazov [1-2, 4-7], [8] (DSB), Rosenfeld [60], Sayılı [18] (260-278), [27] (SeT), Sédillot [8], Shcheglov [3-4a, 7-9, 13], Shishkin [1-3], Shmidt, Subbotin, and Vyatkin [1], Tuqan [1] (444-449), Vernet [24a] (EI²), Vil'danova [4], Vyatkin [1].

Memorial collection and collection of papers: "Ulugh Beg" [1-3].

M1. Treatise on Determining the Sine of 1° by operations based on Arithmetic and geometric rules by principles of the method of Ghiyath al-Din al-Kashi (Risāla fī istikhrāj jayb daraja wāhida bi'a 'māl mu'assasa 'ala qawa'id hisābiyya wa handasiyya 'ala tarīqa Ghiyāth al-Dīn al-Kashi). Berlin (IGNT. I.15), Cairo (Mustafa Fadil, riyada 37), Istanbul (Kandilli 76, Hüseyin Çelebi 751/3, Mashad (12235/7). The first three of these manuscripts are anonymous, the last two manuscripts are ascribed to al-Rumi (No 808) by copyists and librarians, since the title of this treatise is very near the title of (No 808, M3). The treatise contains description of the determination of Sine 1° by the method of al-Kashi (No 802, M4) and by the method of the author. al-Birjandi (No 938, M1) exposed this treatise and ascribed it to Ulugh Beg: "Since the approximate method of determining the sine of one degree became known, I also want to give the proof of a way of this determining. There are two ways of this determining: one which the Sultan of Geometers Ghiyath al-Din Jamshid al-Kāshī found, and another, which explanation was indicated in the work of the Holy Sultan Martyr Ulugh Beg, [let be] the light on his grave" (Chun tarīqa-yi istikhrāj-i jayb-i yak daraja bi taqrīb ma`lūm shud, tariq-i istikhrāj-i an burhān niz irad konam. Wa an du tariq ast: yaqi an ke Sultan Muhandisin Ghiyath al-Din Jamshid al-Kāshī istikhraj karda, wa digar an ke az masanif-i sultan Sa`id Shahid Ulugh Beg, nur marqaduhi, bayan farmuda) [Tashkent manuscript 457, f. 77a]. Turkish translation of the Kandilli manuscript: Zaki [2], I 133-139. Russian translation of the Berlin manuscript by Rosenfeld: al-Rumi [1]. Research: Rosenfeld and Yushkevich [3], Ahmedov and Rosenfeld [1,5]. Edition, English translation and research: Rosenfeld [64].

A1. Zij of Ulugh Beg (Zīj-i Ulugh Beg) = Sultan Zij (Zīj-i sultānī) = New Zij of Guragan (Zīj-i jadīd-i Gurgāni) P - Alexandria (14), Aligarh (Azad `Abd al-Hayy 119/2, Subh. 2, 11; Univ. 28-29, 78), Baghdad (Sup. 332), Baku (M 115), Berlin (337-338), Cairo (falak 3997/6, 4018, lughat 4350, 5997, 6010/1, 2, mīqāt 45/5, 95, 639/19 1193/3, mīqāt fārisī 1, 5, Fādil mīqāt 65/2, 74, 173/1, 205/1, fārisī 3/5, 6/2, Kavala mīqāt 1/3, Tal`at falak fārisī 10, 18/2, mīqāt fārisī 4/1, 8/1), Calcutta (1485/6; Buhar 227; Madrasa 166-167), Cambridge (166-167, 214, Browne Sup. 738-740, Corpus 210), Edinburg (new 11), Gotha 9358), Hyderabad (riyāda. 53, 303, 305, 307, 504; Nizam. 538; Osm. 456; Salar hay'a 12-14, 14/1, museum 142), Istanbul (AS 2693; Atıf 1705; BU 4612, Veliyuddin 2284/3; Millet Feyzullah 1340; NO 2932; Ragıp 920; SM Aşir 571, Beşir 427, Esat 993, Hafid. 195, Hamid. 844, Jarulla 14/8, Selim. 376, Yahya 246, Yeni Cami 783; TK Revanköşk 1714), Jerusalem (14-17; Khalid.), Jaipur (11), Kabul (Matb. 232), Lahore (Univ. 14), London (455b, 457a, b, 7346, 7374, 11216; Ellis M 416; Ind. 741/3, 2233-2236, Ross 17), Madras (Firuz 42, 45, 50, 53, 73), Manchester (Lind. 709), Mashhad (107, 5334, 5555-5556, 7699; Farhang 20/2; Mawlawi 34/5; Univ. 180, 277-279), Moscow (932), Mosul (Yahya 127), Oxford (I 65, 70/1, 456, 516-518, 1515-1516, 1518, 2368, 2731, Sup. 7699, 16637, 16742, 16747), Paris (758/8, 786), Patna (1041), Peshawar (1776), Princeton (981 - table of tangents, Yehuda 5030), Kazan (192), Rampur (1206-1209), Rome (Vat. Sbath 506), St. Petersburg (B 835, C 619, 1140, 1675-1676, 1843; Nat. Khan. 118 - only introduction, PNS 512/4; Univ. 175), Sofia (580), Tashkent (457 - incomplete, 511-513, 2118, 2214, 2218, 7531), Tbilisi (153/191), Tehran (129-130, 1824; Milli 49, 1135; Sipahsalar 676-679, 3456; Univ. 499, 892, 1885, Adab. 13). Arabic translation by al-Kāshī (Ta`rīb al-zīj) – (No 802, A3) by Qadi Hasan Yahya ibn `Alī al-Rifa`, and other translations: Baku (B 5652); Florence (283), Leiden (105, 2537), London Ind. 741/3), Oxford (II 273, 219/2), Paris (2534/6), Rome (Vat. 429), Tashkent (2123), Tehran (182).

German translation of sine and tangent tables: Schoy [34] (92-108). Russian and Uzbeki translation by A. Ahmedov: Ulugh Beg [7], English, Russian and Uzbeki translation of Astrological Book by A. Ahmedov: Ulugh Beg [8]. Turkish translations by ibn `Uthmān (No 1127): Cairo (Tal`at falak turki 33).

Description of the Tashkent manuscripts: SVR (I 228), description of the Tashkent manuscript 2214: Qary-Niyazov [1] (98-284). Description of the Oxford manuscript 70/1: SIAT (166-167). Edition of the introduction by L. Sédillot: Ulugh Beg [3], French translation of the introduction by L. Sédillot: Ulugh Beg [4], Latin translations of chronological and geographical parts by Greaves: Ulugh Beg [1], al-Tusi and Ulugh Beg [1], Greek translation of the part on geography: al-Tūsī and Ulugh Beg [2], Latin translation of star catalogue by Hyde: Ulugh Beg [2]. English translation of star catalogue by Peters and Knobel: Ulugh Beg [5]. Star catalogue: Ulugh Beg, Brahe, Halley, and Hevelius [1]. German translation of the trigonometric tables: Schoy [33] (92-108). Russian translation of fragments: Ahmedov [30]. Research: Buriyev [1], Fayzullayev [4], Orbeli [1], C. Peters [1], Qary-Niyazov [2], A. Rizvi [1], L. Sédillot [8], Shcheglov [1-6], Shevchenko [1], Sobirov [5], Subbotin [1]. Research of the Georgian translation of Georgia Vakhtang VI (1675-1737) by King: Arsenashvili [1], Marr [1].

In the foreword it is stated that the zij was compiled by Ulugh Beg with the help of al-Rumī (No 808) and al-Kāshī (No 802) and after their death with the help of al-Qushjī (No 845). Introduction in 4 books: 1) calendars, 2) spherical astronomy, 3) the Sun, the Moon, and the planets, 4) fixed stars. Tables: chronological, trigonometrical, of spherical astronomy, of movements of the Sun, the Moon, and the planets, of parallax and

eclipses, of visibility of the crescent, table of geographical coordinates of 240 points, table of ecliptical coordinates of 1018 fixed stars, astrological tables.

A2. Treatise of Ulugh Beg (Rusāla-yi Ulugh Beg) P - Aligarh (Azad. Subh. 17), St. Petersburg (Nat. 118). Introduction to A1.

817. KHIDRSHAH EFENDI, AL-MANTAŞAVI

Khidrshah Efendi (d. 1449), Turkish astronomer. After being educated in his own country, he continued reading in Egypt for 15 years. Returned to Turkey when Alauddin al-Tusi came to Anatolia and had benefit of his experience. Started teaching at a madrasa in Balat (Menteşe, Turkey) and died there. His father was the judge in Balat.

See: MAMS (III 44), OALT (25).

A1. Treatise on the Astrolabe (Risala fi'l-asturlab) P - St. Petersburg (Nat. 317/3).

A2. Mukhtasar der Ma'rifat al-Taqwim – is mentioned in OALT.

818. NUR AL-DIN AL-BALKHI

Nūr al-Dīn Abū'l-Qāsim `Alī ibn Aḥmad al-Balkhī (14th c.), from Balkh, astronomer.

See: GAL² (II 298), MAA (176), MAMS (II 495), PL (II 73); Pingree [56] (EIr).

A1. Introduction to the Science of Stars (al-Madkhal fī `ilm al-nujūm) P - Berlin (IGMN III. I), Cairo (mīqāt 143, 876/2, 1204, Fāḍil mīqāt 207, Taymūr riyāḍa 184), Istanbul (SM AS 2702), Patna (2479), Princeton (Yehuda 4072). Persian translation: Istanbul (SM AS 2702). Description of the Berlin manuscript: Ruska and Hartner [1] (216-217). Treatise in 60 chapters.

A2. Strong Argument for the Proof that Heaven has no Supports (al-Ṣamad fī bayān anna al-samāwāt bi ghayr `amad) - Hyderabad (riyāḍa. 190).

A3. Ascensions on Horizons (Maṭāli` al-āfāqī) - Baku (B 44).

819. MAS`UD AL-MASHHADI

Mas`ūd ibn Mu`tazz al-Niẓāmī al-Mashhadī (15th c.), from Mashhad, mathematician.

See: GAS (V 115), MAMS (II 496).

M1. Super-commentary on "Propositions of Substantialization" (Ḥāshiya `alā Ashkāl al-ta'sīs) - Mashhad (5355-5356). Super-commentary on the work (No 655, M1) of al-Samarkāndī written in 1420.

820. HUSAYN QONAWI (HUSAYN AL KONAVİ)

Ḥusayn ibn Ḥasan Qonawī (15th c.), Turkish astronomer and astrologer.

See: MAMS (II 496), KZ (I 933), OALT (5), OM (III 260).

A1. Garden of Astrologers (Rawḍa al-munajjimīn) - is mentioned in OALT and OM. Treatise was written in 1429.

821. KHALIL AL-HUSAYNI (HAYRUDDİN HALİL B. İBRAHİM)

Khayr al-Dīn Abū `Abdallāh Khalīl ibn Ibrāhīm al-Ḥusaynī (15th c.), Ottoman mathematician, worked in Istanbul at the court of Ottoman Sultan Mehmed II (Fatih / the Conqueror) 1444-1446, 1451-1481).

See: MAA (177), MAA² (178), MAMS (II 496), PL (II 10), OMLT (I, 33-36), STMI (401).

M1. Key to Treasures of the Masters of the Pen and Lamp of Symbols of Rulers of Figures (Miftāḥ-i kunūz-i arbāb-i qalam wa misbāḥ-i rumūz-i aṣḥāb-i raqam) = Treatise on Arithmetic (Risāla fī l-ḥisāb) P - Cambridge (Sup. 1228, 3616/2), Hyderabad (riyāḍa. 424), Istanbul (SM Esat 3158), London (Sup. 7693), Oxford (1905/6), Paris (168), Tashkent (2621/1, 5331). All manuscripts except the Istanbul one are under the first title; the Istanbul manuscript is under the second title. The complete list is given in OMLT. Treatise is dedicated to Sultan Mehmed II and contains an introduction and 10 chapters: 1-4) different kinds of multiplication, 5-6) different kinds of division, 7) problems, 8-10) extraction of roots of 2nd, 3rd, and 4th powers.

M2. Book of Difficulties in Arithmetic Solutions and those that are Incomprehensible (Mushkil gushā-yi ḥisāb u mu`ḍil numā-yi kitāb) = Concise [Book] on Arithmetic (Mukhtaṣar fī' l-ḥisāb) P - Istanbul (SM AS 2731 - under the first title), Istanbul (Esmi khan 294 - under the second title). The complete list is given in OMLT.

822. `ABD AL-GHANI IBN AL-`ARABANI

`Abd al-Ghanī ibn Ḥusam al-Dīn Aḥmad ibn al-`Arabānī al-Miṣrī (d. 1450), Egyptian astronomer.

See: GAL (II 159), GAL^2 (II 159-169), MAA^2 (183), MAMS (II 496), SSM (74).

A1. Wonderful in Sciences, Subtle in Objects and Delight of Loving for Pupil Studying Heaven and Climates (Gharā'ib al-funūn wa mulaḥ al-`uyūn wa-nuzhat al-`ushshāq li'l-ṭālib al-mushtāq fi'l-falak wa'l-aqālīm) - Algiers (1554), Cairo (mīqāt 876/1), Gotha (2066/2), Milan (291), Mosul (234/13), Oxford (I 111/4, II 564a).

823. MUHAMMAD AL-`URDI

Muḥammad ibn Fakhr al-Dīn ibn Qays al-`Urḍī (15th c.), mathematician.

See: MAA (199), MAMS (III 34).

M1. Perspicacity in Commenting "Delight" (al-Nubha fī sharḥ al-Nuzha) - Baku (B 2858), Oxford (I 966/5). Commentary on the work (No 783, M7) of Ibn al-Hā'im.

824. ABU' L-WAFA IBN SAID

Abū'l-Wafā ibn Sa`īd (15th c.), mathematician.

See: MAMS (II 497), PL (II 8); Pingree [50] (EIr).

M1. Concise [Book] of Measurement (Mukhtaşar mushtamil bi'l-misāḥa) P - St. Petersburg (A 265). Treatise was written in 1420.

825. SHARAF AL-DIN `ALI YAZDI

Sharaf al-Dīn `Alī Yazdī (d. 1454), from Taft near Yazd, historian, mathematician, and astronomer, worked in Herat at the court of Shahruh ibn Tīmūr (1405-1447); in Sultaniya at the court of his son Ibrahim-Sultan; and in Qumm at the court of Shahruh's grandson Mirza Sultan-Muhammad, again in Sultaniyya. He wrote his famous historical treatise H1 about the victories of Tīmūr. He taught Yūnus-Khan, Babur's grandfather; participated in the revolt of Sultan-Muhammad against Shahruh but was saved from punishment as Ulugh Beg needed him as an astronomer. He lived his last years in Taft and died there.

See: AGL (519-524), KZ (II 122, 134, III 65, 108, IV 24, 175, 526, V 260, 638-639, VI 162), MAMS (II 497), PL (I 283-288, II 9, III 219-220), PL^2 (797-807); Browne [4] (362-365), Lunin [4] (40-43), Urunbayev [2], Voronovsky [2] (122), T. Yaziji [1] (IA).

M1. Treatise on Joints of Fingers (Risāla-yi `aqd-i anāmil) = Treatise Explanation of Reckoning on Joints [of Fingers] (Risāla fī bayān ḥisāb al-`aqd) = Reckoning on Joints [of Fingers] (Risāla dar ḥisāb al-`uqūd) P - Cairo (majlis 134/11), Mashhad (67), Paris (772/24), Tehran (5138/48, 6594/51; Univ. 1035/32).

M2. Essence of what is wanted in the Science on Magic Squares and Numbers (Kunh al-murād fī `ilm al-wafq wa'l-a`dād) P - London (7859), Tehran (Malik 6321/1; Mahdawi 275/1) - is mentioned in KZ (V 638-639).

M3. Comprehensive [Book] (Shāmil) P - Tehran (Danishsaray 631/5; Univ. 3267).

A1. Book on the Science of Astrolabe (al-Kitāb fī `ilm al-asṭurlāb) - is mentioned by Urunbayev [2] (23).

Mu1. Treatise of Sharaf al-Din (Risāla-yi Sharafiyya) P - is mentioned by Darwish `Alī in his work (No 1128, Mu1), see Semyonov [5] (30).

H1. Book of Victories of Tīmūr (Ẓafar-nāma-yi Tīmūrī). Editions: Yazdī [3, 5-6], French, English and Turkish translations: Yazdī [1-2, 4]. Research: Urunbayev [2].

826. MUHAMMAD AL-JAMI AL-ALMASI

Muḥammad ibn Muḥammad al-Jāmī al-Almāsī (15th c.), from Jam, philosopher, worked in Herat at the court of Shahruh ibn Tīmūr (1405-1447).

See: MAMS (II 498), PL (II 357).

E1. Gardens of Teachers (Riyaḍ al-nāṣiḥīn) P - Dushanbe (Semyonov 49), St. Petersburg (C 1336, 1417; Nat. PNS 494), Paris (726), Tashkent (2751, 2799). Description of the Tashkent manuscripts: SVR (III 414-417). Editions: M. Jami [1-2]. The work was written in 1431.

827. ZAKARIYA AL-TALBISI

Zakariyā ibn Yaḥyā al-Talbīsī (15th c.), Egyptian astronomer.

See: GAL² (II 1025), MAA (202), MAMS (III 18), SSM (74).

A1. Treatise on Operations with the Northern Almucantar Quadrant (Risāla fī'l-`amal bi rub` al-muqanṭarāt al-shimāliyya) - Berlin (5864), Cairo (Ṭal`at majlis 367/2). Description of the manuscript: Ahlwardt [1] (268). Description of determining distances to inaccessible objects: Wiedemann [36] (60). Treatise in 30 chapters on chronology, astronomy, and mathematical geography.

828. `ABD AL-RAHMAN IBN AL-MUHALLABI

`Abd al-Raḥmān ibn Muḥammad ibn Muhammad, known by the name "Ibn al-Muḥallabī" (15th c.), Egyptian astronomer.

See: SSM (75).

A1. Support of Membering the Position of Threads of Surplus of Turn (`Umdat al-dhākir li-waḍ` khuṭūṭ faḍl al-dā'ir) - Cairo (Fāḍil mīqāt 220 - incomplete), Dublin (Beatty 3641). Treatise on the sundial theory written in 1426.

829. AHMAD AL-HALABI

Shihāb al-Dīn abū'l-`Abbās Aḥmad ibn Burhān al-Dīn Ibrāhīm ibn Khalīl ibn Aḥmad al-Ḥalabī (d. 1455), astronomer from Aleppo.

See: GAL (II 159), MAA (177), MAMS (II 498), PL (II 59-60), SSM (75).

A1. Aim of Pupils on Operations with the Quadrant of Astrolabe (Bughyat al-ṭullāb fī'l-`amal bi rub` al-asṭurlāb) - Leiden (1001/8), Paris (2524/10), Princeton (Yehuda 1168), Garrett (4918). Description of the Leiden manuscript: Ruska and Hartner [1] (185-186).

A2. Concise Exposition on Operations with Tables with Sexagesimal Ratio (Nubdha fī'l-`amal bi jadwal al-nisba al-sittīniyya) - Oxford (I 1035/1).

A3. Treatise on Operations with the Sine Quadrant (Risāla fī'l-`amal bi'l-rub` al-mujayyab) - Princeton (Yehuda 1168, after A1).

A4. Table of Altitude of Fixed Stars on the Ascension of Dawn (Jadwal irtifā` al-kawākib al-thābita `inda ṭulū` al-fajr) - Cairo (falak 8525/2).

A5. Table of Azimuth for the Latitude of Damascus (Jadwal al-samt li-`arḍ Dimashq) - Cairo (falak 8525/3, Fāḍil mīqāt 71/1), Damascus (9227).

A6. Happy Necklace on the Solution of "Ilkhanid Zij" (al-`Iqd al-yamānī fī ḥall al-Zīj al-Ilkhānī) - Cairo (Ṭal`at mīqāt 226/1), Istanbul (SM Hafīd. 181/1), Oxford (897). Arabic version of Zij (No 606, A8) of al-Ṭūsī with introduction in 40 chapters and additional tables for Aleppo.

830. SHAMS AL-DIN IBN AL-SHAMMA

Shams al-Dīn Muḥammad ibn Muḥammad al-Ḥalabī (or al-Ḥamawī) al-Ayyūbī "[Ibn] al-Shammā`" (d. 1458), theologian, and astronomer, also knowledgeable in logic.

See: KZ (III 445, 566, VI 184), MAMS (II 498).

A1. Zīj of Shams al-Din (Zīj Shams al-Dīn) - is quoted in KZ (III 566), the zīj is compiled on the basis of observations of Ibn al-Shāṭir (No 750).

831. MUHAMMAD AL-HABBAK

Abū `Abdallāh Muḥammad ibn Aḥmad ibn Yaḥyā al-Ḥabbāk al-Tilimsānī (d. 1462), from Tlemcen, mathematician and astronomer.

See: GAL (II 332), GAL² (II 365), MAA (177), MAA³ (175), MAMS (II 499), SSM (140).

M1. Gift to Reckoners on the Number of Years and Arithmetic (Tuḥfat al-ḥussāb fī `adad al-sinīn wa'l-ḥisāb) - Fas (Zāwiya 6c).

A1. Aim of Pupils on the Science of the Astrolabe (Bughyat al-ṭullāb fī `amal b`l-asṭurlāb) - Algiers (1458/1), Berlin (5800), Cairo (mīqāt 169/1, 177, Taymūr riyāḍa. 177/1), Fas (Zāwiya 6d), Rabat (480/3, 2508), Vienna (329).

A2. Achievement of what is Required on Operations with the Sine Quadrant (Nayl al-maṭlūb fī'l-`amal bi rub` al-juyūb) - Rabat (2509).

832. MAHMUD AL-WALISHTANI

Maḥmūd ibn Muḥammad ibn Muḥammad al-Qāḍī al-Wālishtānī al-Harawī (15th c.), from Walishtan, Balujista; judge (al-qāḍī), mathematician, and astronomer; worked in Herat at the court of Shahruh ibn Tīmūr.

See: MAMS (II 499), PL (II 9), SSM (156), STMI (329-330, 409).

M1. (Fawā'id-i jamālī) P - Istanbul (SM AS 1865/3), London (449, Sup. 23570), Madras (Firuz 2/19). Revision of the work (No 655, M1) of al-Samarkandī, it was written in 1435.

M2. Concise [Book] on the Science of Arithmetic (Mukhtaṣar dar `ilm-i ḥisāb) P- Oxford (1525), Paris (772/2).

A1. Treatise for Ghiyath al-Din (al-Risāla al-Ghiyāthiyya) P - Cairo (Taymūr riyāḍa 347/3), Hyderabad (Said. hay'a 3). Persian revision of the work (No 547, A1) of al-Jaghmīnī compiled for Ghiyāth al-Dīn Aḥmad.

833. ABU ISHAQ KUBNAWI

al-Ḥaqq ibn Abī Isḥāq Kubnawī (15th c.), mathematician and astronomer, worked in Diyarbakır at the court of Akkoyunlu Sultan Ya`qub Bahadur-Khan (1478-1490).

See: MAMS (II 499-500, 529, III 21), SSM (186).

M1. Treatise on Harmonic Proportions (Risāla dar tanāsub-i ta`līfī) P - Tehran (Univ. 2417/5, 3025). Treatise was written in 1458.

M2. Treatise on Duplication (Risāla-yi taḍ`īfiyya) P - London (Sup. 23570/25), Tehran (Mahdawi 105/5).

M3. Commentary on the First Four Books of "Exposition of Euclid" by Naṣīr al-Dīn al-Ṭūsī (Sharḥ al-maqālāt al-arba` al-ūlā min Taḥrīr Uqlīdis li-Naṣīr al-Dīn al-Ṭūsī = Commentary on the "Exposition of Euclid" (Sharḥ min Taḥrīr Uqlīdis) = Finding by Abū Isḥāq, Insufficiency of Object and Absence of Merit (Ilḥāq Abī Isḥāq `alā quṣūr al-biḍā `a wa `adam al-istiḥqāq) - Cairo (Kavala riyāḍa. 114), Istanbul (SM AS 2741), London (Sup. 151). Commentary on the work (No 606, M1) of al-Ṭūsī.

A1. Treatise on Astronomy (Risāla dar hay`at) P - Tehran (1818, 1819/2).

Treatise in 3 parts plus conclusion: 1) on the form of heaven and elements, 2) on arithmetic, 3) on geometry, conclusion on prayer times and determining the azimuth of Qibla.

A2. Super-commentary on Commentary on "Compendium" (Ḥāshiyya Sharḥ Mulakhkhaṣ) - Tehran (Univ. 2417/3). Super-commentary on the commentary (No 808, A1) by al-Rūmī on the work (No 547, A1) of al-Jaghmīnī.

A3. Commentary on Ilkhanid Zīj (Sharḥ-i zīj-i īlkhānī) P - Tehran (Univ. 2417/4). Commentary on the work (No 606, A8) of al-Ṭūsī.

A4. Commentary on "Twenty Chapters on the Knowledge of Astrolabe" of al-Ṭūsī (Sharḥ-i Bīst bāb dar ma`rifat-i asṭurlāb-i Ṭūsī) P - Rasht (majlis 71/3). Commentary on the work (No 606, A14) of al-Ṭūsī.

A5. Commentary on "Thirty Chapters" (Sharḥ-i Sī faṣl) P - Tehran (Univ. 2417/6). Commentary on the work (No 606, A16) of al-Ṭūsī.

834. HASAN CHELEBI (HASAN ÇELEBİ)

Ḥasan Chelebī ibn Mūsā ibn Maḥmud Qāḍī -zāda Rūmī (15th c.), son of al-Rūmī (No 808), astronomer; worked at the Samarkand observatory of Ulugh Beg (No 816).

See: GAL (II 235, 447), MAMS (II 500) ; Voronovsky [2] (129).

835. MU`IN AL-DIN AL-KASHI

Mu`īn al-Dīn al-Kāshī (15th c.), from Kashan, astronomer, worked at the Samarkand observatory of Ulugh Beg (No 816).

See: MAMS (II 500); Qary-Niyazov [1] (97, 147, 176), Voronovsky [2] (129).

836. MANSUR AL-KASHI

Manṣūr ibn Mu`īn al-Dīn al-Kāshī (15th c.), son of Mu`īn al-Dīn al-Kāshī (No 835); astronomer, worked at the Samarkand observatory of Ulugh Beg (No 816); was also teacher of al-Birjandī (No 938).
See: MAMS (II 500); Qary-Niyazov [1] (97, 147), Voronovskiy [2] (130).

837. HATIM

Hatim (15th c.), astronomer.
See: MAMS (II 500).
A1. Sapphires of Timekeeping (Yawāqit al-mawāqīt) - Gotha (1980/4), New Haven (1473).

838. IBRAHIM AL-NAWAWI

Abū Isḥāq Ibrāhīm al-Nawāwī (15th c.), knowledgeable in inheritance and algebra.
See: MAA (177), MAMS (II 501).
M1. Poem on the Science of Inheritance and Algebra and Almucabala (Manẓūma fī `ilm al-farā'iḍ wa'l-jabr wa'l-muqābala) - Berlin (5993). Poem of 1000 verses written in 1450.

839. KAMAL AL-DIN AL-MAYBUDHI

Kamāl al-Dīn Ḥusayn ibn Mu`īn al-Dīn al-Ḥusaynī al-Maybudhī (d. 1466), philosopher, mathematician, and astronomer, pupil of al-Dawwani (No 894), worked in Iran.
See: GAL (II 272), GAL^2 (II 294), GAS (V 113), KZ (II 499, III 397), MAMS (II 501), PL (III 260-262), SSM (159).
E1. Commentary on "Guide to Philosophy" (Sharḥ Hidāyat al-ḥikma) - Tashkent (3074, 6661/2). Commentary on the work (No 595, E1) of al-Abharī.
M1. Super-commentary on the "Exposition of Euclid" (Ḥāshiya dar Taḥrīr-i Uqlīdis) P - Mashhad (48), Rampur (23), Tehran (Ṣipahsalar 500). Super-commentary on the work (No 606, M1) of al-Ṭūsī.
A1. The Mirror of the World (Jām-i Gītī-yi-numā) P - Cairo (Ṭal`at majlis 873/2, fārisī 26/2, Taymūr ḥikma 111). Treatise on cosmology and astronomy in 30 parts.

840. AHMAD AL-HARAZYAKI

Aḥmad ibn Maḥmūd al-Harazyakī (15th c.), philosopher.
E1. Commentary on "Guide to Philosophy" (Sharḥ Hidāyat al-ḥikma) - Tashkent (7862/3). Commentary on the work (No 595, E1) of al-Abharī.

841. MUHAMMAD AL-HUSAYNI

Muḥammad ibn Sharīf al-Ḥusaynī (15th c.), philosopher.
E1. Commentary on "Guide to Philosophy" (Sharḥ Hidāyat al-ḥikma) - Tashkent (3096/1). Commentary on the work (No 595, E1) of al-Abharī.

842. `IZZ AL-DIN AL-WAFAI

Abū'l-Faḍā'il `Izz al-Dīn `Abd al-`Azīz ibn Muḥammad al-Wafā'ī (d. 1469), mu'adhdhin/muwaqqit of Mu'ayyad mosque in Cairo.
See: GAL (II 159-160), GAL^2 (II 160), KZ (V 227, VI 309, 337), MAA (177-178), MAA^2 (178-179), MAMS (II 501-503), OALT (332), SSM (70-72); Tekeli [2].
M1. Delight (Support) of Pupils in the Knowledge of Arithmetic (Nuzhat (`Umdat) al-ṭullāb fī ma`rifat al-ḥisāb) - Cairo (mīqāt 170/1, 620/5b, riyāḍa. 354). Treatise on sexagesimal arithmetic in 5 chapters, written in 1447.
M2. Brilliant Pearls on Operations with Sexagesimal Ratio (al-Lu'lu'a al-muḍī'a fī'l-`amal bi'l-nisba al-sittīniyya) - Cairo (mīqāt 170/1, 620/5b), Oxford (I 967/5, 1034/2). Abridgement of M1.

M3. Gift to Pupils from the whole "Support of Pupils" (Tuḥfat al-ṭullāb bi jam` `Umdat al-ṭullāb) - Oxford (II 286/2), (GAL[2], MAA). An extract from M1.

A1. Brilliant Stars on Operations with the Almucantar Quadrant (al-Nujūm al-zāhirāt fi'l-`amal bi rub` al-muqanṭarāt) - Cairo (mīqāt 197, 775/1, Fāḍil mīqāt 176/1, 228-230, Taymūr riyāḍa. 303/1), Istanbul (SM Fatih 3448), Leiden (1001/1), Paris (2531, 2544/5), Tunis (Nat. 18020. 18158) - is quoted in KZ (VI 309). Revision of the works (No 715, A5) of al-Mizzi and (No 775, A4) of al-Maridīnī, in 25 chapters plus introduction.

A2. Pole of Brilliant [Stars] on Operations with the Almucantar Quadrant (Quṭb az-zāhirāt fi'l-`amal bi rub` al-muqanṭarāt) - Cairo (mīqāt 112, 568/1, 738/2, 771/4, Fāḍil mīqāt 150), Turin (64/8). Abridgement of A1 in 15 chapters.

A3. Spilled Pearls on Operations with the Almucantar Quadrant (Al-Durar al-muntathirāt fi'l-`amal bi rub` al-muqanṭarāt) - Cairo (mīqāt 135/1, 1093/3), Paris (2544/16, 4825). Description of the second Cairo manuscript: Kunitzsch [1] (34-35). Another abridgement of A1.

A4. Delight of the Observer on Operations with the Sun and the Moon (Nuzhat al-naẓar fi'l-`amal bi'l-shams wa'l-qamar) - Berlin (5824 - a fragment), Cairo (ḥuruf 69/4, mīqāt 489, 617/1, Ṭal`at mīqāt 254/5), Dublin (3684), Leiden (991/4), Paris (2531/2 - the autograph), Tunis (Nat. 18291) - is quoted in KZ (VI 337). Treatise on operations with the sine quadrant, prayer times and visibility of the crescent in 25 chapters plus introduction and conclusion.

A5. Treatise on the Sine Quadrant (Risāla fi'l-rub` al-mujayyab) = Graceful Treatise on Operations with the Sine Quadrant (Risāla laṭīfa badī`a fi'l-`amal bi'l-rub` al-mujayyab) - Beirut (207), Berlin (5824), Cairo (Ṭal`at mīqāt 233/2, Taymūr majlis 196/12), Princeton (Yehuda 367, 4103). Abridgement of A4 in 10 chapters.

A6. Concise Treatise on Operations with the Sine Quadrant (Risāla mukhtaṣara fi'l-`amal bi'l-rub` al-mujayyab) - Cairo (mīqāt 66). Another abridgement of A4 in 10 chapters.

A7. Treatise on Instrument Called Equatorial Circle (Risāla `alā'l-āla al-musammāt bi dā'irat al-mu`addal) - Cairo (majlis 323/4, mīqāt 482/1, 526-527, 779/1, 911, 987, Fāḍil mīqāt 79, Ṭal`at mīqāt 83/4, Taymūr majlis 250/3, riyāḍa. 108/1, 161/, Zaki 706/5), Istanbul (SM AS 2626, Laleli 2726/2), Jakarta (Sup. 623), Leiden (1001/6), Paris (2521/10, 2532/1, 2544/7), Princeton (982; Yehuda 3442), Rome (Vat. Sbath 805), Tunis (Nat. 18020, 18158). Edition and research: Tekeli [2].

A8. Detailed Explanations on Operations with the Image of [Celestial] Equator (Sharḥ al-mufaṣṣal fi'l-`amal bi ṣurat al-mu`addal) - Alexandria (ḥisāb 53).

A9. Threading Beads on Operations with Perpendicular Horary Lines (Naẓm al-`uqūd fi `amal al-sā`āt `alā'l-`amūd) - Cairo (Fāḍil mīqāt 93/4). Treatise on the construction of sundials on columns.

A10. Sufficient in Time for Determining the [Angle of] Turn, its Surplus, and Azimuth (Kifāyat al-waqt li-ma`rifat al-dā'ir wa faḍlihi wa-'l-samt) - Rome (Vat. Borg. 217/1), Tunis (Nat. 18291) - is mentioned in KZ (V 227). Treatise on an astrolabe or a quadrant.

A11. Complete Treatise Related to the Quadrant of a Circle (Tatimmat al-risāla al-muta`alliqa bi rub` al-dā'ira) - Paris (2544/8 - incomplete).

A12. Essence of Pearls on Operations with the Moon (Khulāṣat al-durar fi'l-`amal bi'l-qamar) - Manchester (301/L).

A13. Treatise on Operations with the Shadow Plane (Risāla fi'l-basīṭa al-ẓilliyya) -Manchester (301/C), Princeton (Yehuda 373). Treatise on sundials.

A14. Use in Reckoning Oblique [Sundials] (Fā'ida fi ḥisāb al-munḥarifāt) - Gotha (1381/3).

A15. Treatise on Operations with Concave [Sundials] (Risāla fi'l-`amal bil-muqa``ar) - Cairo (mīqāt 451, 504/1), Manchester (301/N). Treatise was dedicated to al-Ashraf Sayf al-Dīn Ināl (1453-1461) Mamluk Sultan of Egypt.

A16. Achievement of Thoughts on Operations [of Timekeeping] by Night and Day (Natīja al-afkār fi a`māl al-layl wa'l-nahār) - Cairo (Ṭal`at majlis 367/5).

A17. Greatest Achievement (al-Natīja al-kubrā) - Princeton (Yehuda 861/1). Astronomical tables.

A18. Treatise on Operations on Horizons with the Sine Quadrant (Risāla fi'l-`amal bi'l-rub` al-mujayyab al-āfāqī) - Princeton (Yehuda 4462/2).

A19. Concise Treatise on Operations with the Sine Quadrant (Risāla mukhtaṣara fi'l-`amal bi'l-rub` al-mujayyab) - Cairo (mīqāt 66).

A20. Treatise on the Perfect Astrolabe (Risāla fi'l-asṭurlāb al-tāmm) - Princeton (Yehuda 273, after A13).

A21. Indications on Operations with Sine [Quadrant] on Which Diurnal Circles Are Located (al-Ishārāt fi'l-`amal bi'l-jayb al-mawḍū ` `alayhi al-madārāt) - Princeton (Yehuda 373, after A20).
A22. Precious Pearls on Timekeeping by the Moon (Nafā'is al-durar fī ma`rifat al-waqt bi'l-qamar) - Cairo (mīqāt 588/4 - anonymous). The title of this treatise is mentioned in A4. Treatise in 2 chapters with 10 tables.
A23. Supplies for Travels on Operations with the Moon (Zād al-safar fi'l-`amal bi'l-qamar) - Cairo (Ṭal`at mīqāt 165/2 - anonymous). Abridgement of A22, differs from A12.
A24. Treatise on Solution of "Incomparable Pearls" for the Period of a Full Year (Risāla fī ḥall al-Durar al-yatīma li muddat sana kāmila) - Cairo (falak 3833/1). Commentary on the work (No 815, A15) of Ibn al-Majdī.
A25. Note on Operations with Minutes of Difference of Visible Horizons Reckoned by `Ala al-Dīn Ibn al-Shāṭir (Nubdha fi'l-`amal bi daqā'iq ikhtilāf al-āfāq al-mar'iyya wa hiyya allatī ḥasabahā `Alā al-Dīn ibn al-Shāṭir) - Cairo (Fāḍil mīqāt 155/2, 181/2, Taymūr riyāḍa. 303/2). Commentary on the work (No 750, A34) of Ibn al-Shāṭir, containing a note on the effect of refraction at the horizon.
A26. Treatise on Operations with the Triangle (Risāla fi'l-`amal bi'l-muthallath) - Cairo (Ṭal`at mīqāt 242/9). Treatise on use of "perfect quadrant" of Ibn al-Shāṭir (No 750) in 15 chapters.
A27. Treatise on Operations with the Sine Octant (Risāla fi'l-`amal bi jayb al-thumn) - Cairo (mīqāt 1093/2a). Treatise in 10 chapters.
A28. Guide for Pupils on Modes of Determining Operations [of Timekeeping] by Arithmetic (`Umdat al-ṭullāb wa kayfiyyat istikhrāj al-`amal bi'l-ḥisāb) - Cairo (riyāḍa. 620/8).
A29. Gift to Pupils on Modes of Determining Astronomical Operations (Tuḥfat al-ṭullāb fī kayfiyyat istikhrāj al-a`māl al-falakiyya bi'l-ḥisāb) - Cairo (riyāḍa. 620/5a). Abridgement of A28.
A30. Speech on Almucantars on Terrestrial Equator (Kalām `an muqanṭarāt khaṭṭ al-istiwā') - Cairo (mīqāt 1093/2b)
A31. [Poem on Values of Arc Sine Function] - Cairo (mīqāt 771/3, 905/2), Paris (2486).
A32. [Tables for Marking Azimuth Curves on Astrolabes] - Cairo (Fāḍil mīqāt 27/4).
A33. Small Habtaq (al-Ḥabtaq al-aṣghar) - is mentioned in the work (No 1052, A1) of al-Ladhiqi.

843. AHMAD YAZIJI OGHLU BICAN (YAZICIOĞLU AHMED BİCAN)

Aḥmad Yāzījī oghlū (Yazıcıoğlu) Bijān (15th c.), Turkish geographer and astronomer (yazıcıoğlu = son of a scribe).
See: AGL (591-594), GAL² (I 882), KZ (III 191, IV 187), MAMS (II 503), OM (I 16-17); Taeschner [1] (36-37), OCLT (4-11).
AG1. Concealed Pearl (Durr-i maknūn) T - Berlin (178-180), Dresden (269), Gotha (8), Paris (160), Vienna (1450-1452).
AG2. Mervels of the Created (`Ajā'ib al-makhlūqāt) T - Berlin (181), London (4088), Vienna (1483, 1513), Wroclaw (41). Edition: Bijan [1]. Revision of the work (No 624, E1) of al-Qazwīnī written in 1453.

844. MAHMUD-SHAH KHALJI

Maḥmūd-Shāh Khaljī (d. 1469), astronomer; and the Sultan of Central Indian State of Malwa in 1436-1469; before 1436, he was the vizier of Mas`ud-Khan (1435-1436), the Gurid Sultan of Malwa.
See: MAA (149), MAMS (II 503-504), PL (II 74-75), STMI (330); Delambre [1] (196-198), Haig [1] (EI), [2] (IA), Lane-Poole [1] (310-311).
A1. Explanation of the Ilkhanid Zīj (Tauḍīḥ-i zīj-i īlkhānī) P - London (Sup. 11636). Commentary on the work (No 606, A8) of al-Ṭūsī.
A2. Comprehensive Zīj (Zīj-i jāmi`) P - Oxford (1522). Partial Latin translation: Greaves [1]. Research: Wright and Wiedemann [1].

845. `ALI AL-QUSHJI (ALİ KUŞÇU)

`Alā al-Dīn `Alī ibn Muḥammad al-Qūshjī or Qūshchī (Ali Kuşçu) (ca 1402-1474), born in Samarkand; was falconer (kuşçū) of Ulugh Beg (No 816) in his youth; later pupil of Ulugh Beg and al-Rūmī (No 808), then

astronomer at the Samarkand observatory of Ulugh Beg. Supervised the work on the Zīj of Ulugh Beg (No 816, A1); was Ulugh Beg's ambassador to China. After the deaths of al-Rūmī (No 808) and al-Kashi (No 802), he became the head of the observatory. After Ulugh Beg's death, he worked in Istanbul at the court of Sultan Mehmed II (Fatih) (1444-1446 and 1451-1481) and headed the madrasa at Aya Sofia mosque; he was the pioneer of science in the Ottoman Empire. Died in Istanbul.

See: AGL (523-526), GAL (II 235), GAL² (II 329-330), GOW (29-30), KZ (II 15, 26, 109, 116, 197-198, 230, 263, 449, 573, III 93, 392, 430, 437-438, 447, 454, 458, 557-560, IV 5, 270, 279, 501-502, V 12, 188, 417, 528), MAA (178-179), MAMS (II 504-506), OALT (27-38), OMLT (I, 20-27), PL (II 9-10, 75-77), PL² (1408), SSM (158), STMI (291-292, 335); Abdullayev and Hikmatullayev [1] (57-61), Adnan [2] (IA), [10] (32-34), Cunbur [1], Ehgamberdiyev [1], Matviyevskaya and Tllashev [6] (41-42), Matviyevskaya and Sokolovskaya [1] (40-45), F. Rahman and Pingree [1] (EIr), Sayılı [18] (261-271), Siddyqov [5], Sobirov [2-3], Sohrweide [1], Taeschner [1] (48-55), Ünver [5], Urunbayev [1, 3-5].

M1. Treatise on Arithmetic (al-Risāla al-Muḥammadiyya fī'l-ḥisāb) attributed to Sultan Mehmed II, Dresden (116), Leiden (205), Ayasofya (2733/2), Azhar (354), Laleli (2715/2). The complete list is given in OMLT. Russian translation by Atayev: al-Qushjī [5]. Research: Matviyevskaya and Tllashev [6] (127-128), Sobirov [2-3] (general researches), [4] (on the introduction of al-Qushjī terms "muthbat" and "manfi" for added and subtracted quantities instead later terms "zā'id" and "nāqis". Al-Qushjī's terms are translations of Chinese terms and are presently used for positive and negative quantities in Iran, Turkey, Central Asia, and Azerbaijan; European terms for these quantities came from al-Qushjī's terms through Byzantine mathematicians). Treatise was dedicated to Sultan Mehmed II.

M2. Treatise on the Science of Arithmetic (Risāla dar ʿilm-i ḥisāb) = Balance of Arithmetic (Mīzān al-ḥisāb) = Essence of Arithmetic (Zubdat al-ḥisāb) -Aligarh (Azad Subh. 4-5), Berlin (81/6), Calcutta (Curz. 570; I Sup. 896; Buhar 352/3), Copenhagen (17/2), Dushanbe (Ferd. 680, 912, IZA 89/1), Istanbul (SM AS 2640, 2723), Lahore (Univ. 1/2), Leiden (1035), London (Sup. 421/2; Ind. 2242-2245, 2254/8), Madras (503-504; Firuz Sup. 1), Mashhad (5299, 5302-5304, 5523, 7673; Gawharshad 1164, 1671/1, 1718/2), Oxford (1528-1533), Paris (783, 2180, 2363/1, 2364/2), Peshawar (1724/5), Rasht (71/9), St. Petersburg (A 265, B 814/3, 1023, 3803, 4107, C 1464, 1557), Tashkent (2245/11, 2692/2, 3356/3, 3394/3`, 6057/3), Tehran (2785/1, 2786/1, 3117/4; Malik 697, 3225/1, 4137/32; Mahdawi 262/2, 282/26; Univ. 1319, 2008/3, 2107/3, 4417/2, Adab. 36/3, Ilah. 339/1, 524/3, 555/3), Yazd (979/9-11). The complete list is given in OMLT. Russian translation by Atayev: al-Qushjī [3]. Research: Sobirov [1]. Work in 3 books: 1) Indian arithmetic, 2) sexagesimal fractions, 3) geometry.

M3. Treatise on Fractions (Risāla-yi kusūr) P - Samarkand (823908/3), St. Petersburg (D 1330). Research: Sobirov [1].

M4. Essence of Arithmetic (Khulāṣat al-ḥisāb) - Dushanbe (Ferd. 912), Yerevan (66/2, 167).

M5. Treatise on Geometry (Risāla dar handasa) P - Cambridge (418), Copenhagen (693/5), Tehran (Dihkhuda 59/1).

M6. Treatise on Arithmetic Rules and Geometric Indications (Risāla fī'l-qawāʿid al-ḥisābiyya wa'l-dalā'il al-handasiyya) - Revision by al-ʿAmili: (No 1058, M4). Commentary on the treatise (o 802, M4)of al-Kāshī. It is mentioned in OMLT (25).

M7. Treatise on Arithmetic and Geometry (Risāla dar ḥisāb u handasa) P - Mashhad (Farhang 14/1), Tehran (Muʿtamid 115/2), Yazd (Waziri 509/7).

M8. Treatise on Determining the Magnitudes of Angles of a Triangle by the Magnitudes of Sides in Non-Rectangular Triangles Consisting of Arcs of Great Circles [of a Sphere] (Risāla fī istikhrāj maqādīr al-zawayā min maqādīr al-aḍlāʿ fī'lmuthallathāt al-ghayr qā'imat al-zawāyā al-ḥāditha min qisiyy al-dawā'ir al-ʿiẓām) - - Istanbul (SM Carullahh 2060). The complete list is given in OMLT.

M9. [On a Geometric Problem] - Cairo (Ṭalʿat riyāḍa. 111/2).

MA1. [Geometric Problems and Astronomy] - Samarkand (823908/2), Yerevan (514/3, 540).

A1. Treatise on the Science of Astronomy (Risāla dar ʿilm-i hayʾat) = Treatise on Astronomy (Risāla dar falakiyyāt) = Persian Treatise on Astronomy (Risāla-yi fārisiyya dar hayʾat) P - Aligharh (Azad. ʿAbd al-Salam 734/63, 1156/110, Habib 44/1, Subh. 511/4-5, 520/4, 9, 11, 15, 29; Univ. 21), Berlin (331), Bombay (Univ. 178), Cairo (lughat 4348, majlis fārisī 1), Calcutta (1489, Sup. 897, Curz. 571; Buhar 324/11), Cambridge (Browne Sup. 687, 1488, II Sup. 91), Copenhagen (17/1, 18/2, 693/5), Hamadan (Gharb. 136/3), Hyderabad (jadid 1619, 2683, majlis 96, riyāḍa. 142, 150, 174, 324, 391; Nizam. 534; Osm. 237, 239, 1174; Said. hay'a 23; Salar hay'a 6, 10-11, 16, 40), Istanbul (AS 2070, 2639-2640, Ayasofya 2733/3, Esad Efendi 2023/4, NO 4913/8, Reisülküttab 1192/6, Türk İslam Eserleri Müzesi 2086, Arkeoloji Müzesi 565, Ayasofya 2754/1, SM Yıldız Riyaz 370, Univ.), Lahore (Univ. 13), London (II 458/1, 2, 811/2, 853/2, 858/1, 1560/3,

Sup. 23440/2; Ind. 2240, 2952, 3072), Madras (505, 638; Firuz 63, 253), Manchester (Lind. 609, 725), Manisa (1713), Mashhad (17, 136-141, 5243-5244, 5550-5552, 5363-5367, 5383-5387; Gawharshad 559/1, 577/7, 799, 895, 932, 933/1, 1067/1, 1590, 1775, Mawlawi 451/1, 508/1, 510/1), Munich (346/1), Oxford (1534-1538), Paris (789, 2144, 2364/1, 1393), Rampur (1188-1194, 3024b), Rayy (Abd al-`azim 116), Rome (Vat. 19/2), St. Petersburg (A 267-268, 311, 1065, B 817, 833, 2315, 4280; Nat. Khan. 158/3), Tashkent (420/6, 2984/5, 3356/1, 5619/3, 7622/8, 7761/1, 9276/1; SADUM 481), Tehran (135, 186, 2141-2143, 2767/14, 2819/3, 2926/1, 2938/10, 2976/1, 3451/4, 5099/5; Univ. 890, 2086/6, 2571/2, 3219/1, 3371/1, 4982, 9595, Adab. 116, 207/1, 332/4, Ilah. 60/1, 82/2, 190, 337, 377, 516, 647, 653, Huquq 189/2), Vienna (139; Acad. 346), is quoted in KZ (III 458). In addition to those stated above, 41 manuscript copies are mentioned in OALT.

Description of the Tashkent manuscript 3356/1: SVR (XI 99-101). Edition: al-Qushjī [2]. Facsimile edition of the Tashkent manuscript 3356/1 and Uzbeki translation by Rasulev and Munirov: al-Qushjī [3]. Russian translation by Usmanov: al-Qushjī [4]. Research: Khatipov and Usmanov [1], Muminov [3]. Treatise contains introduction on principles of geometry and physics and 2 books: 1) spherical astronomy, structure of the universe and the movement of the Sun, the Moon, and the planets. 2) geography, chronology, determining the aziumuth of Qibla, sizes and distances of the Sun, the Moon, and the planets.

A2. Treatise of Conquest (al-Risāla al-fatḥiyya) -Cairo (Ṭal`at majlis 366/8 - a fragment, Taymūr riyāḍa. 106/4 - fragments), Amasya (1791/5), Delhi (Univ. 1998), Istanbul (AS 2733, Halet Efendi 538, Yeni Cami 1176/22; Kandilli 65/8, 122/1; Technic. Univ. BTTAM 8), Konya (Koyunoğlu 11359), Madras (Firuz 1275), Mashhad (Univ. 230), Paris (2504/4), Tehran (Univ. 1107, 1126), is quoted in KZ (IV 379). Edition: al-Qushjī [1]. Arabic version of A1.

A3. Commentary on Zīj of Ulugh Beg (Sharḥ-i Zīj-i Ulugh Beg) = Stairs of Heavens (Sullam al-samā) P - Amasya (1635/2), Bombay (Firuz 49), Dushanbe (1189), Istanbul (Kandilli 113, 262/2; Ragıp 928; SM Hamidiye 850, Feyzullah Efendi 1342, III. Ahmed 3503, Hasan Hüsnü 1285, Şehid Ali 2761/4, Carullah 1493; Arkeoloji Müzesi 544; Millet, Ali Emiri Farisi 890), Leiden (105), London (Sup. 156), Mashhad (Fazil. 41; Mawlawi 268; Nawwab 18), Oxford (1519), Paris (2534-2535), St. Petersburg (A 1140).

A4. Stages of Heavens (Marqāt al-samā) - Turkish translation by Molla Parviz: Vienna (Acad. 347).

A5. Great Extract from "Astronomy" (Talkhīṣ Hay`a mujassam) - Tehran (Mu`tamid 115/1). Extract from A1 or A2.

A6. Fā'ida fī Ashkāli `Utarid. - III. Ahmed 3483/24.

A7. Risāla fī Aṣl al-Khārijī Yumkinu fī al-Sufliyayn. - Istanbul (SM Carullah 2060/7, Hüseyin Çelebi 751/8, Laleli 3743/7).

A8. Risāla fī Anna Ḥukm al-Khārij Ḥukm al-Tadwīr bi `Aynihī fī Wuqūf al-Kawākib. - Istanbul (SM Carullah 2060/6, Hüseyin Çelebi 751/5).

A9. Risāla fī Ḥall Ashkāl Mu`addil al-Qamar li-al-Masīr. - Istanbul (SM Carullah 2062/6, Hüseyin Çelebi 751/7, Fatih 5396/4, 3401/4, III. Ahmed 3483/24).

A10. Risāla fī Anna Kulla mā Yusta`malu bi'l-Shaklayn al-Mughnī wa al-Zillī Yumkinu an Yusta`mal bi al-Mistara wa al-birkār. - Istanbul (SM Carullah 2060/11, Hüseyin Çelebi 751/4).

A11. Sharḥ al-Tuḥfa al-Shāhiyya fī al-Hay'a. - Baghdad (al-Matḥaf al-Irāqī 6271), Cairo (Dār al-Kutub 4265), Istanbul (SM Hüseyin Çelebi 750, Ayasofya 3643, Carullah 2060/1, 1461/1, III. Ahmed 3304).

G1. Book on China (Khitāy-nāma). Descriptions: KZ (IV 501); Fleischer [3], Taeschner [1] (48-55). Edition and French translation of three chapters: Schefer [1].

846. ZAYN AL-DIN IBN QUTLUBUGHA

Abū'l-Faḍl Zayn al-Milla wa'l-Dīn al-Qāsim ibn `Abdallāh ibn Qūṭlubughā al-Hanafī al-Sūdūnī (1399-1474), historian; lived and died in Cairo.

See: GAL (II 99-100), GAL² (II 93), KZ (I 156, 159, 182, 258, 294, 327, 338, 417, 480, II 89, 91, 179, 211, 219, 352, 396, 450, 491, III 214, 231, 353, 473, 628, 636, IV 136, 173, 202, 210, 213, 277, 364, 405, 472, 520, 571, 585, V 159, 400, 437, 457, 513, 535, 551, 614, 627, VI 124, 192, 225, 229, 249, 266, 286, 304, 317, 374, 434), MAMS (II 506-507); Anonymous [2b] (EI), Rosenthal [7] (EI²).

H1. Crown of Information on Classes of Hanafites (Tāj al-tarājim fī ṭabaqāt al-ḥanafiyya) - Algiers (1725-1726), Beirut (117), Berlin (10023-10024), Istanbul (SM 1049 , AS 3451), Mosul (45, 64/4, 208, 226), Paris (4803-4805). Edition by Flügel: Ibn Qutlubugha [1]. Historical treatise containing information on scholars.

847. `ALI AL-QARAFI AL-NAQQASH

Abū'l-Ḥasan Nūr al-Dīn `Alī ibn `Abd al-Qādir ibn Muḥammad al-Qarāfī al-Qāhirī al-Naqqāsh (d. 1475) from Cairo; constructor of astronomical instruments (al-naqqāsh = engraver).

See: MAMS (II 507), SSM (76).

A1. Treatise on the Astrolabe (Risāla fī'l-asṭurlāb) - Paris (2560/9), St. Petersburg (B 1029/3).

A2. Guide for the Skilled in Operations with the Quadrant on Usual Horizons (`Umdat al-hudhdhāq fī'l-`amal bi'l-rub` fī sā'ir al-āfāq) - Cairo (Zaki 706/2 - anonymous), Paris (2560/9), Princeton (Yehuda 4103).

A3. [Table of Lunar Mean Movement] - Cairo (mīqāt 448/3). Table is compiled according to the work (No 815, A19) of Ibn al-Majdī.

A4. [Notes on Lunar Visibility of the Crescent and Miscelllaneous Topics in Timekeeping] - Cairo (mīqāt 681/3). Notes are dictated by Ibn al-Majdī (No 815) and recorded in 1427.

A5. Light of a Pupil (Nūr al-aḥdhāq). Abridgement: A2.

848. `UMAR AL-QURASHI AL-TUNISI

Abū Ja`far `Umar ibn `Abd al-Raḥman ibn Abū'l-Qāsim al-Qurashī al-Tūnisī al-Tūzarī (15th c.), from Tunis, astronomer.

See: MAA (179), MAMS (II 507), SSM (141).

A1. Frankness of Advices on Making Tympanums (Ikhlāṣ al-naṣā'iḥ fī `amal al-ṣafā'iḥ) - London (407/8).

A2. Required Result on Operations with the Sine Quadrant (Maḥṣal al-maṭlūb fī'l-`amal bi rub` al-juyūb) - Cairo (Taymūr riyāḍa. 131/5). Treatise in 40 chapters, probably written about 1445.

849. `ABD AL-RAHMAN AL-AQFAHSI

`Abd al-Raḥmān ibn `Alī ibn Muḥammad al-Aqfahsī al-Ṣūfī (15th c.), astronomer, pupil of Ibn al-Majdī (No 815).

See: GAL (II 159), MAA (179), MAMS (II 507-508), SSM (75).

A1. Concealed Jewel on Reckoning Kept [in Tables] (al-Jawhar al-maknūn fī'l-hisāb al-masūn) - Berlin (5692), Cairo (Fāḍil mīqāt 246 - a fragment). Description of the Berlin manuscript: Ahlwardt [1] (170-171). Treatise on the construction of astrolabe.

850. MUHAMMAD BAKHRAQ

Jamāl al-Dīn Muḥammad ibn `Umar Bakhraq (d. ca 1450), mathematician, died in India.

See: MAMS (II 508).

M1. (Kashf al-ḥijāb fī sharḥ al-lubāb fī uṣūl al-ḥisāb) - Baghdad (2954).

M2. Poem on the Science of Arithmetic (Manẓūma fī `ilm al-ḥisāb) -Tarim (al-Kaf 79).

A1. Book on the Establishment of a Net for Making what is necessary from the Science on Celestial Spheres (Kitāb naṣb al-sharak li iqtināṣ mā tashtadd ilayhi al-ḥāja min `ilm al-falak) - Muqalla (Matraf), Saywun (al-Kaf 132/6).

851. SA`ID AL-SAMLALI

Sa`īd ibn Sulaymān al-Samlālī Akrūmī (d. 1477), mathematician.

See: MAMS (II 508).

A1. Abridgement of Commentary of Ibn al-Bannā on Poem of al-Muqru` (Ikhtiṣār li Sharḥ Ibn al-Bannā `alā Manẓūma Abī Muqri`) - Rabat (2483). Abridgement of the work (No 696, A5) of Ibn al-Bannā.

852. MUHAMMAD IBN QADI SHUHBA

Badr al-Dīn Abū `Abdallāh Muḥammad ibn Qāḍī Shuhba al-Asadī al-Shāfi`ī (15th c.), Egyptian theologian and mathematician.

See: GAL (II 37), GAL^2 (II 25-26), SSM (75); Schacht [2] (EI^2).

M1. Book on Arithmetic (Kitāb fī'l-ḥisāb) - Cairo (Fāḍil majlis 56/2, Ṭal`at majlis 688/2, 825/6 - both anonymous), Princeton (Selly Oak 1900, Yehuda 3021 - both anonymous). Treatise on multiplication.

853. IBRAHIM AL-BIQA`I

Ibrāhīm ibn `Umar ibn al-Ḥasan al-Ribāṭ al-Biqā`i al-Shāfi`ī (d. 1480), Egyptian mathematician.
See: GAL (II 179-180), MAA (179), MAMS (II 508), SSM (77).
M1. Freedom in the Two Sciences of Arithmetic and Geometry (al-Bāha fī `ilmay al-ḥisāb wa'l-misāḥa) - London. Commentary on this work: M2.
M2. Solution of [Difficulties of] "Freedom" in the Two Sciences of Arithmetic and Geometry (Ibāḥat al-Bāha fī `ilmay al-ḥisāb wa'l-misāḥa) - Cairo (riyāḍa. 3), London. Commentary on M1.

854. BALI MUNAJJIM (MÜNECCİM BALİ)

Bālī Munajjim (d. 1481), Ottoman astronomer and astrologer.
See: MAMS (III 17), OALT (42).
A1. Gift of a Monopolist on Quadrature of a Circle and others (Tuḥfat al-ḥaqīr fī rub` al-dā'ira wa ghayrihā) [Risāla dar `Ilm al-Hay'a] P - Istanbul (SM AS 2588).

855. HASAN IBN AL-MAHALLI

Ḥasan ibn Muḥammad ibn al-Maḥallī (15th c.), Egyptian astronomer.
See: SSM (77).
A1. Brilliant Jewels (al-Jawhara al-muḍī'a) - Cairo (mīqāt 772/1). Poem on stars and lunar stations.

856. AL-HASAN AL-KARADISI AL-TUBNI

al-Ḥasan ibn Khalīl ibn `Alī al-Karādīsī al-Ṭubnī (1420-1482), born in Tubna, Algeria, was mu'adhdhin of Ashrafiyya mosque in Cairo.
See: GAL (II 160), GAL² (II 160), MAA (180), MAMS (II 508-509), SSM (78).
A1. Auxiliary Propositions for Drawing Oblique and Plane Sundials (Ashkāl al-wasā'iṭ fī rasm al-munḥarifāt wa'l-basā'iṭ) - Cairo (falak 3832, 4025, 4312/2 - a fragment, mīqāt 5/1, 6, 688, riyāḍa. 892, Fāḍil mīqāt 5-6), Heidelberg (95), Paris (2543), Princeton (983, Yehuda 1116/1). Description of the Princeton manuscript: Hitti, Faris and `Abd al-Malik [1] (311).
A2. Treatise on Operations [of Determining] the Crescent by Tables (Risāla fī `amal al-ahilla bi ṭarīq al-jadāwil) - Cairo (mīqāt 523, 694, Fāḍil mīqāt 214).
A3. Treatise on Operations [of Determining] the Crescent by Reckoning (Risāla fī `amal al-ahilla bi'l-ḥisāb) - Cairo (falak 4027/2).
A4. Sufficient for the Pupil who needs Reckoning for the Solution of Celestial Problems (Kifāyat al-muḥtāj min al-ṭullāb ilā ma`rifa al-masā'il al-falakiyya bi'l-ḥisāb) - Cairo (mīqāt 121, 761, Fāḍil mīqāt 155/1, Khalīl mīqāt 10/3), Gotha (1391).
A5. Brilliant Subtleties (al-Nukat al-zāhirāt) - Cambridge (Palm. 32/21), Leiden (1001/17). Commentary on the work (No 775, A4) of al-Maridīnī.
A6. Treatise on Sunrises, Sunsets, and Transits through Middle [of Heaven] in a City are Compared with another City (Risāla fī ṭulū` al-shams wa'l-ghurūb wa'l-tawassuṭ fī balad bi'l-nisba ilā balad ukhrā) - Cairo (falak 4027/1, mīqāt 620/6, Fāḍil mīqāt 181/1).
A7. Guarded Mystery on "Concealed Pearl" (al-Sirr al-maṣūn fī'l-Durr al-maknūn) - Cairo (mīqāt 1107/2).
A8. Light of Eyes on Operations with the Moon (Nūr al-baṣar fī'l-`amal bi'l-qamar) - Cairo (mīqāt 550). Treatise on the visibility of the crescent.
A9. Treatise on Determining the Position of the Hidden Thread and Position of Lines of Surplus of Turn under It (Risāla fī ma`rifat waḍ` khayt al-musātara wa waḍ` khuṭūṭ faḍl al-dā'ir takhtahi) - Cairo (mīqāt 181/1, Taymūr riyāḍa. 343/2). Treatise on sundials.

857. MUHAMMAD IBN AYYUB

Abū'l-Faḍl Muḥammad ibn Aḥmad ibn Ayyūb (15th c.), imam of Nalhasiyya mosque.
See: MAMS (III 28-29).
M1. Gift to Pupils on Commentary on "Delight of Arithmetic" (Tuḥfa al-ṭullāb fī sharḥ Nuzha al-ḥisāb) - London (Sup. 752). Commentary on the work (No 783, M7) of Ibn al-Hā'im.

858. YUSUF SINAN-PASHA (SİNAN PAŞA)

Sinān al-Dīn Yūsuf ibn Khiḍr Bęg ibn Jalāl al-Dīn (d. 1486), known by the names "Sinān-Pāshā"and "Khwāja-Pāsha"; vizier of Ottoman Sultan Mehmed II (Fatih) (1444-1446 and 1451-1481); worked in Istanbul and Edirne; historian, theologian, mathematician and astronomer.

See: GAL[2] (II 327), GOW, KZ (II 258, 308, III 446, VI 114, 240, 397, 489), MAA (180), MAMS (II 509-510), OALT (45-48), OMLT (27-28), OM (III 223-225), SSM (170); Babinger [4] (EI), Mazioglu [1] (IA),

M1. [Commentary on Geometric Section in "Treatise of Conquest" of `Alī al-Qushjī] - Istanbul (Köprülü 721). The complete list is given in OMLT. Mathematical commentary on the work (No 845, A2) of al-Qushjī.

M2. Treatise that Obtuse [Angle] can become Acute without being Right (Risāla fi'l-munfarija taṣīru ḥādda qabla an taṣīra qā'ima) - Istanbul (Köprülü 721) without title; is mentioned in KZ with the title.

A1. Explanation of Times in the Knowledge of Almucantars (Muḍīḥ al-awqāt fī ma`rifat al-muqanṭarāt) - Istanbul (SM AS 2708).

A2. Super-commentary on Commentary by Qadi Zade on "Compendium" of al-Jaghmīnī (Ḥāshiya `alā sharḥ Qāḍī -zāda `alā Mulakhkhaṣ al-Jaghmīnī) - Baghdad (Al-Matḥaf al-`Irāqī 17113), Cairo (hay'a 65, Kavala hay'a 3/3), Çorum (3019), Escorial (II 959), Istanbul (SM Fatih 1401/2, 3491, 3401/2, 3391, Carullah 1461/1, 1465/1, 1463/1, Laleli 2120, Feyzullah 1334/1, Hasan Hüsnü 1294/4, III. Ahmed 3299). Super-commentary on the commentary (No 808, A1) by al-Rūmī on the work (No 547, A1) of al-Jaghmīnī.

A3 Comments on "Limit of Comprehension" (Ḥāshiya àlā Nihāyat al-idrāk) - is mentioned in KZ (VI 397). Commentary on the work (No 668, A1) of al-Shīrāzī.

859. SIDI HASAN AL-QOMANATI (AL-KOMANATİ)

Sīdī (or Sayyid) Ḥasan ibn Sīdī `Alī al-Qomanātī al-Sīwāsī (14-15th c.), son of (No 766) `Ali al-Qomanatī, born in Qomanat (now Gümenek) near Tokat (Turkey), later lived in Sivas, worked in Edirne; Turkish astronomer.

See: GAL (I 400), GAL[2] (II 327), KZ (III 565), MAA (167), MAMS (II 510), OALT (22), SSM (156-157).

A1. Perfect on Commentary on "Comprehensive Zīj" (al-Kāmil fī sharḥ al-Zīj al-shāmil) - Cairo (mīqāt 951), Istanbul (SM Laleli 2137), Paris (2530/9).

Commentary on the work (No 256, A2) of Abū'l-Wafa written in 1419. It is a revision of his father's (No 766) commentary on the same work (A2) of Abū'l-Wafa.

860. AHMAD AL-KHALIDI

Aḥmad ibn Muḥammad al-Khālidī (15th c.), Yemeni mathematician.

See: GAL (I 510), GAL[2] (I 702), MAY (94), SSM (133).

A1. Explanation of Mystery (Īḍā ḥ al-ghāmiḍ) - Super-commentary on (No 861, A1) by al-Alfī. Commentary on the work (No 560, M1) of al-`Uṣayfirī, written in 1463.

A2. The Lamp (al-Miṣbāḥ) - commentary on the chapter on surveying: (No 862, A1) of `Imād al-Dīn Yaḥyā.

861. IBRAHIM AL-ALFI

Ibrāhīm ibn Khālid ibn Aḥmad al-Alfī (15th c.), Yemeni astronomer.

See: SSM (133).

A1. [Super-commentary on Commentary by al-Khālidī on the work of al-`Uṣayfirī] - Cairo (majlis 703/9).

862. `IMAD AL-DIN YAHYA

`Imād al-Dīn Yaḥyā ibn Muḥammad ibn Ḥasan (15th c.), Yemeni astronomer.

See: SSM (133).

A1. Book of Explanation of Finding what is Dark in "Lamp" (Kitāb īḍā ḥ al-multaqaṭ limā abhama al-Miṣbāḥ) - Cairo (majlis 703/9). Commentary on chapter on surveying; in the work (No 860, A2) al-Khālidī.

863. MUHAMMAD AL-KAFIYAJI (AL-KAFİYECİ)

Muḥyī al-Dīn Abu `Abdallāh Muḥammad ibn Sulaymān al-Bargamawī al-Kāfiyājī (d. 1474), Turkish theologian and astronomer.

See: GAL (138-140), GAL² (140-141), OALT (26-27), OMLT (27), SSM (75-76).

M1. Solution of Difficulties in Discussions of Propositions (Ḥall al-ishkāl fī mabāḥith al-ashkāl) - Cairo (majlis 394/4). Treatise on geometry and surveying.

A1. Sufficient Book on Explanation of a Long Row (al-Kitāb al-kāfī fī bayān al-ṣaff al-ṭawīl) = Treatise on Explanation of Facing the Qibla (Risāla fī bayān istiqbāl al-Qibla) - Cairo (majlis 273/1, mīqāt 530), Hyderabad (Asaf. 455). The book was written in 1467.

A2. Commentary on "Compendium on Astronomy" (Sharḥ al-Mulakhkhaṣ fi'l-hay'a) - is mentioned in OALT.

864. MUHAMMAD AL-GHAZAWI

Muḥammad al-Ghazāwī (15th c.), timekeeper at the Muqassam Mosque in Cairo.

See: SSM (76).

A1. [Tables of Ascensions] - Cairo (mīqāt 1218). Tables for latitude 30° of Cairo.

865. `ALI AL-QALASADI

Abu'l-Ḥasan `Alī ibn Muḥammad ibn Muḥammad ibn `Alī al-Qurashī al-Basṭī al-Qalaṣādī (d. 1486), born in Granada, came from Basta, Spain; mathematician, worked in Granada, Tlemcen, and Tunis, died in Tunis.

See: GAL (II 343-344), GAL² (II 378-379), KZ (II 180, IV 496, V 204, 236), MA (103-104), MAA (180-182), MAA² (179), MAA³ (175-176), MAMS (II 510-512), SSM (140-141); Djebbar [10] (ENWC), al-Maqqari [2] (45-46), Sa`idan [16] (DSB), Souissi [3], [5] (EI²), Tuqan [1] (461-465).

M1. Removal of the Veil from the Science of Arithmetic (Inkishāf al-jilbāb fī funūn al-ḥisāb) - Cairo (Fāḍil riyāḍa. 2). French translation: Woepcke [15]. Treatise in 4 chapters (5+6+6+2 chapters) written in Tunis in 1445.

M2. Removal of the Veil from the Science of Arithmetic (Kashf al-jilbāb `an `ilm al-ḥisāb) - Alexandria (ḥisāb 4), Cairo (riyāḍa. 1039), Escorial (2853/4), London (418, 903/2), Manche-ster (353/B), Paris (2463/3), Tetwan (227), Tunis (2054). Treatise in 8 chapters.

M3. Opening the Mysteries in the Science [of Figures] Ghubar (Kashf al-asrār `an `ilm ḥurūf al-ghubār) - Algiers (399/7, 1448/9), Beirut (239/1), Cairo (falak 3320, 3954, 4329, majlis 39/17, riyāḍa. 81/4, 181/4, 1037, Fāḍil majlis 84/1, Taymūr riyāḍa. 139/2, Zaki 188/1, 490/1), Escorial (II 853/4), Florence (Naz. 79), Jerusalem (Yehuda 158/2), London (418, 903/2), Mosul (112, 114/2), Paris (2473, 5350), Princeton (1039; Yehuda 5252), Qayrawan, Rabat (455/3, 4456/3, 2432-2436), St. Petersburg (B 1070), Tripoli (Um. 1097/1), Tunis (168, 402, 2934, 3297, 4775; Nat. 18748), Vienna (Acad. 323). Description of the Princeton manuscript: Hitti, Faris, and `Abd al-Malik [1] (326). Description of the treatise: Tuqan [1] (463-465). Edition: al-Qalasadi [2]. French translation by Woepcke: al-Qalasadi [1]. Research: Eneström [1] (on approximate rule of extraction of square roots). The book contains introduction on figures ghubar and 4 parts: 1) arithmetic of integers, 2) fractions, 3) roots, 4) algebra and theory of perfect numbers.

M4. Introduction for Beginning [into Arithmetic] According to the Symbols of Indians (Tabṣirat al-mubtadī bi'l-qalam al-hindī) - Istanbul (SM Laleli 2702), Rampur (I 409/3), Tunis (2043).

M5. Canon of Arithmetic and Sufficient for Them who Possess Minds (Qanūn al-ḥisāb wa ghunyat dhawī al-albāb) - Berlin (5995), Escorial (8534). Description of the Berlin manuscript: Ahlwardt [1].

M6. Aim of those that go by the Right Path and Sufficient to the Limit (Bughyat al-muhtadī wa ghunyat al-muntahī) - Alexandria (Far. 4), Fās (Zawiya 7b, 26d), Madrid (340), Rabat (956/4). Treatise on inheritance.

M7. Commentary on "Concise Exposition" of Ibn al-Bannā (No 696) (Sharḥ Talkhīṣ Ibn al-Bannā) - Gotha (1477), Paris (2464/1), Tetwan (227). Description of the Gotha manuscript: Pertsch [3] (105-106). Partial French translation: Woepcke [11] (58-62). Commentary on the work (No 696, M1) Ibn al-Bannā.

M8. Commentary on Poem of Ibn al-Yāsamīn, (No 521) (Sharḥ al-Urjūza al-Yāsamīniyya) - London (Ind. 770/2), Rabat (456/1). Commentary on the work (No 521, M1) Ibn al-Yāsamīn.

M9. Aim of Pupils on [Poem on Operations with] Roots of Ibn al-Yāsamīn (Ghunyat al-ṭālibīn `alā judhūr Ibn al-Yāsamīn) - Cairo (Taymūr majlis 86/8), Princeton (Yehuda 4009). Commentary on the work (No 521, M2) Ibn al-Yāsamīn .

M10. [Commentary on Treatise of Ibn al-Sharran on Inheritance] - Escorial (II 853/6).

M11. Sufficient for Them Who Possess Mind for Commenting "Removal of the Veil" (Ghunya dhawī al-albāb fī sharḥ Kashf al-jilbāb) - Tunis (Nat. 14554). Commentary on M1.

M12. Treatise on the Meaning of Fraction and Numerator (Risāla fī ma`ānī al-kasr wa'l-basṭ) - Tunis (2039).

M13. Treatise on the Knowledge of Complicate and Simple (Risāla fī ma`rifat al-murakkab wa'l-basīṭ) - Tunis (2043).

M14. Explanation of Binomials (Sharḥ dhawāt al-asmā') - Rabat (456/3).

M15. Clear Introduction to Pleasant Problems on Numbers (al-Tabṣira al-wāḍiḥa fī masa'īl al-a`dād al-lā'iḥa) - Tunis (2049).

M16. [Arithmetic] Treatises (Rasā'il) - Tripoli (Um. 1097/2).

M17. [Commentary on Treatise of Khalīl al-Jundi on Inheritance] - Cairo (Taymūr riyāḍa. 139/3).

M18. Introduction to the Science of Arithmetic (al-Tabṣira fī `ilm al-ḥisāb) = Introduction into Arithmetic [by Figures] Ghubar (al-Tabṣira fī ḥisāb al-ghubār) - is mentioned in KZ (II 180). Commentary on M1.

M19. All on Inheritance (Kulliyyāt fi'l-farā'iḍ) - is mentioned in KZ (V 236).

866. MUHAMMAD AL-SANUSI

Abū `Abdallāh Muḥammad ibn Yūsuf al-Muqrī' al-Sanūsī (1427-1486), pupil of al-Qalasadi (No 865); theologian, jurist, and astronomer, lived and died in Tlemcen.

See: GAL (II 323-326), GAL² (II 352-356), KZ (I 440, IV 214, 242, V 225, 296, VI 597), MAA (221), MAMS (II 512-513), SSM (140); Ben Scheneb [7] (EI),

A1. Support for those who are devoted to the Science of the Astrolabe (`Umdat dhawī al-aqlāb fī `ilm al-asṭurlāb) = Commentary on Poem "Aim of Pupils on the Science on Astrolabe" (Sharḥ manẓūmat Bughya al-ṭullāb fī `ilm al-asṭurlāb) - Algiers (613/8, 1458/2), Cairo (mīqāt 169/2, 702/5), Fas (Zawiya 6b), Princeton (986-987).

Description of the Princeton manuscripts: Hitti, Faris, and `Abd al-Malik [1] (312).

Commentary on the work (No 831, A1) of al-Habbak.

A2. Sufficient for Pupils on the Science of Astrolabe (Kifāyat al-ṭullāb fī `ilm al-asṭurlāb) - Cairo (mīqāt 780). Treatise was written in 1452.

867. MUHAMMAD AL-TAMIMI

Muḥammad ibn `Umar ibn Muḥammad ibn `Aẓam al-Tūnisī al-Tamimī (d. 1486), from Tunis, astronomer.

See: GAL (II 222), GAL² (II 222-223), MAMS (II 513).

A1. Memoir on Myrtle-Shaped Quadrant (Tadhkira al-nāsī fi'l-rub` al-āsī) - Fas (Zāwiya 5e).

868. SHAH FATH ALLAH AL-SHIRWANI

Shāh Fatḥallāh al-Shirwānī (d. 1486), from Shirwan, pupil of al-Taftazānī (No 772) and al-Rūmī (No 808); philosopher, linguist, and astronomer.

See: KZ (I 207, 254, II 269, VI 114, 138), MAMS (II 513), OALT (42-45).

A1. [Commentary on "Memoir" of al-Ṭūsī] - Istanbul (SM Damad 847, Topkapı III. Ahmed 3314)-is quoted in KZ (II 269). Commentary on the work (No 606, A10) of al-Ṭūsī, was written in 1474.

A2. [Super-commentary on commentary of al-Rūmī on "Compendium"] - Istanbul (Topkapı III. Ahmed 3294)- is mentioned in KZ (VI 114). Super-commentary on commentary (No 808, A1) of al-Rūmī on the work (No 547, A1) of al-Jaghmīnī.

Mu1. Codex on Music (Majalla fi'l-mūsīqā)- Istanbul (TK 3449). Facsimile edition of the manuscript with introduction in English and Arabic by Neubauer: F. Al-Shirwānī [1]. Treatise was written in the tradition of al-Urmawi (No 641) and dedicated to Sultan Mehmed II.

869. LUTFALLAH AL-TUQATI (MOLLA LUTFİ)

Luṭfallāh ibn Ḥasan al-Tūqātī "Molla Luṭfī" (d. 1494), from Tokat (Turkey), pupil of al-Qushjī (No 845) and Sinan Pasha (No 858), librarian of Sultan Mehmed II (1444-1446 and 1451-1481); was executed for his liberal ideas.

See: GAL (II 305-306), GAL² (II 330), KZ (I 4, 153, 166, 206, II 14, 196, 411, 449, 539, III 98, 372, 399, 577, IV 411, V 9, 592, 596, VI 20, 51, 238, 262), MAMS (II 513-514), OM (II 11), OMLT (37-40).

E1. Divine on Objects of Sciences (al-Maṭālib al-ilāhiyya fī mawḍū `āt al-`ulūm) - London (430/1), Princeton (Garr. 1130/1; Yehuda 5668), Vienna (15). Description of the Vienna manuscript: Flügel [6] (12-13). Book in 2 parts: 1) "Arabic Sciences" (31 chapters), 2) "Sciences of Shari`at" (74 chapters, among them: 63) clocks,

timekeeping, times of prayers, and azimuth of Qibla, 68) arithmetic. The book is dedicated to Sultan Bayezid II (1481-1512).

M1. Treatise on Duplication of the Altar (Risāla fī taḍ'īf al-madhbaḥ) - London (Ind. 1229), Esad Efendi (3596). The complete list is given in OMLT. Edition by Yaltkaya with French translation by Corbin and introduction of Adnan: al-Tūqātī [1].

870. 'ABDALLAH AL-BALYANI

Awḥad al-Dīn 'Abdallāh ibn Muḥammad ibn Jamāl al-Ḥusaynī al-Awḥadī al-Balyānī "'Abdallāh Awliyā" (d. 1494); astronomer and mystic.

See: GAL^2 (II 286), KZ (III 519, VI 30), MAMS (II 514), PL (II 482).

A1. Treatise on Astrolabe (Risāla fī'l-asṭurlāb) - Istanbul (TK 3483/1). Description of the manuscript: Kunitzsch [1] (40).

A2. Horoscope of Births (Ṭāli'-i mawlūd) P - London (Sup. 8039). Treatise on astronomy and astrology.

871. MUHAMMAD AL-NIKSARI.

Muhyi'l-Dīn Muḥammad ibn Ibrāhīm ibn Ḥasan al-Nīksārī al-Rūmī (d. 1495), from Niksar (Turkey), Turkish astronomer.

See: MAMS (II 514), OALT (61-62).

A1. Super-commentary on the commentary of Qadi Zade al-Rūmī on "Compendium of Astronomy" (Ḥāshiya 'alā sharḥ al-Mulakhkhaṣ fī'l-hay'a li-Qāḍī-zāda al-Rūmī) - Bursa (Ulucami 2412, Haraççıoğlu 1210/6), Istanbul (AS 2656, Fatih 5396/3, Ill. Ahmed 3291, 3290, Carullah 1504/1, Halet Efendi 537/1; Kandilli 143). Super-commentary on commentary (No 808, A1) by al-Rūmī on the work (No 547, A1) of al-Jaghmīnī.

872. MUSTAFA AL-QONAWI, SHEİKH WAFA (MUSTAFA EL KONEVİ, ŞEYH VEFA)

Muṣliḥ al-Dīn Muṣṭafā ibn Aḥmad al-Qonāwī al-Ṣadrī (al-Ṣayrawī) al-'Isawī "Sheikh Wafā" (d. 1491), from Konya, died in Istanbul; Turkish astronomer.

See: OALT (51-54), , SSM (169).

A1. Almanac of Sheikh Wafa (Ruznāma-yi Sheikh Wafā) T - Cairo (mīqāt Turkī 2/2, 14, Khalīl mīqāt Turkī 3, Kavala majlis 22/1, Taymūr majlis 358/17), Cambridge (711) Istanbul (SM Yeniler 1693, Univ. TY. 661, NO 2955), Paris (187, 194, 185, 188), Wien (356). In addition to those stated above, 36 manuscript copies are mentioned in OALT. Facsimile edition: Velschius [1], Photo-reproductions of two diagrams: SSM (258-259). Calendar for 1676, written in a Christian prison on the island of Rhodes.

A2. Prescription of Seven Planets (Yedi Yıldızın aḥkāmī) T - Istanbul (SM Şehit 2795/12)

A3. Malḥama-i Sheikh Wafa fī al-Kusūf va al-Zalzala va al-Maṭar va al-Bard va al-Aḥvāl al-Javviyāt al-Ukhrā. - Istanbul (SM Yeniler 302/1).

A4. Risāla fī'l-Rub' al-Mujayyab. - Istanbul (Cerrahpaşa 336/4).

873. MUHAMMAD SIBT AL-MARIDINI

Badr al-Dīn Abū 'Abdallāh Muḥammad ibn Muḥammad ibn Aḥmad al-Miṣrī al-Dimashqī (1423-1506), grandson (from daughter) of al-Marīdīnī (No 775), pupil of Ibn al-Majdī (No 815); he was known by the name "Sibṭ (Ibn Bint) al-Marīdīnī"; lived in Damascus and Cairo; was timekeeper of al-Azhar mosque in Cairo, died in Cairo.

See: GAL (II 216-218, 468), GAL^2 (II 215-217, 484), KZ (I 146, II 218, 236, 253, III 11, 192, 233, 391, IV 156, 319, 432, 496, V 205, 332, 345, 407), MAA (182-184, 222), MAA^2 (179), MAMS (II 514-522), OALT (220-221), OM (III 256-257), SSM (80-82), STMI (298-299, 406-407, 422); King [78] (ENWC), Tuqan [1] (461-465).

M1. Subtleties of Truths on Arithmetic of Degrees and Minutes (Raqā'iq al-haqā'iq fī ḥisāb al-daraj wa'l-daqā'iq) - Aleppo (IHAS Antak. 30), Alexandria (ḥisāb 48), Algiers (1468), Baghdad (Sarkis 116), Berlin (5694-5695, 5695a, b, quart. 1170/7; IGMN II 49), Cairo (mīqāt 51/1, 306/1, 437, 507-508, 521/7, 578, 938, 1049, 1120, riyāḍa. 17, Fāḍil mīqāt 125-126, 181/3, 210, Ḥalīm mīqāt 9, Khalīl mīqāt 7/2, Taymūr riyāḍa. 296/4), Hyderabad (riyāḍa. 67, 362, Salar 303), Istanbul (SM Laleli 2750/3), Leiden (2591, 2808/1 - incomplete),

London (Sup. 767), Mosul (744), Oxford (I967/4, II 968/3, 969/1), Paris (2541/1, 2560/11), Princeton (Yehuda 3325, 3475, 4266, 4481), Tripoli (Um. 1105), Tunis (Nat. 18086, 16247). Turkish translation by Yusuf Efendi: Cairo (Taymūr falak Turkī 51/1). Revision of the work (No 815, M1) of Ibn al-Majdī, in 10 chapters.

M2. Essence of Subtleties on Arithmetic of Degrees and Minutes (Zubd al-raqā'iq fī ḥisāb al-daraj wa'l-daqā'iq) = Abridgement of Treatise "Subtleties of Truths on Arithmetic of Degrees and Minutes" (Mukhtaṣar risālat al-Raqā'iq fī ḥisāb al-daraj wa'l-daqā'iq) - Beirut (212), Cairo (mīqāt 131/5, riyāḍa. 181/14), Escorial (II 968/2). Description of the Escorial manuscript: Derenbourg [7] (112). Abridgement of M1. Research: Carra de Vaux [8] (on periodic sexagesimal fractions), Woepcke [13].

M3. Majestic Rarities (Ways) on Arithmetic of Sexagesimal Ratio (al-Ṭuraf (al-Ṭuruq) al-saniyya fī ḥisāb al-nisba al-sittīniyya) - Cairo (majlis 323/3, mīqāt 186/1, 521/9), Cambridge (Palm. 35/30), Escorial (I 965/1). Another abridgement of M1 in 15 or 7 chapters.

M4. Limit of Ordering Operations with Tables of Sexagesimal Ratio (Nihāyat al-rutba fī'l-`amal bi jadāwil al-nisba al-sittīniyya) - Beirut (212), Leipzig (814/5).

M5. Commentary on "Sufficient on Algebra and Almucabala" of Ibn al-Hā'im (Sharḥ al-Muqni` fī'l-jabr wa'l-muqābala li-Ibn al-Hā'im) - Gotha (1491/3), Hyderabad (riyāḍa. 65), St. Petersburg (B 819). Commentary on the work (No 783, M9) of Ibn al-Hā'im.

M6. (al-Qawl al-mubdi` fī'l-Mumti`) = (al-Qawl al-mubdi` fī sharḥ al-Muqni`) - Beirut (242), Cairo (falak 3775, 4391, majlis 144/2, 861/6, mīqāt 521/10, riyāḍa. 358, 612, Zaki 931), Gotha (1491/3), Hyderabad (riyāḍa. 65), Paris (6541), Princeton (1048; Yehuda 479, 1827). Description of the first Princeton manuscript: Hitti, Faris, and Abd al-Malik [1] (329). Commentary on the arithmetic work (No 783, M10) of Ibn al-Hā'im.

M7. Right Direction of Pupils to "Means in the Arithmetic" (Irshād al-ṭullāb ilā Wasīla fī'l-ḥisāb) - Cairo (falak 3815/3, riyāḍa. 2, 101, 181/7, 1064), Istanbul (SM Laleli 2700/1, 2701), Leipzig (Ref. 42), Oxford (I 962, 977). Commentary on the arithmetic treatise (No 783, M8) of Ibn al-Hā'im.

M8. Commentary on "Light on Science of Arithmetic" (Sharḥ al-Lum`a fī `ilm al-ḥisāb) - Alexandria (ḥisāb 11, 15/2, funūn 142, 186/1), Baghdad (Makiya 30), Baku (B 2141/2), Beirut (236), Berlin (5988, 5988a), Cairo (falak 27276/2, riyāḍa. 293, 299, 315, 342-344, 557/3, 652-653, 758, 1087/2, Fāḍil riyāḍa. 29/2, Taymūr riyāḍa. 2), Gotha (1483), Hyderabad (riyāḍa. 7/1), Istanbul (SM Laleli 2746, 2758/2), Jakarta (Sup. 514), London (421/1, 6384), Mosul (Hajiyat 267; al-Hatib 31), Munich (371), Paris (2471), Princeton (1037). Description of the Berlin manuscripts: Ahlwardt [1] (341). Description of the Princeton manuscript: Hitti, Faris, and `Abd al-Malik [1] (326). Commentary on the arithmetic treatise (No 783, M6) of Ibn al-Hā'im.

M9. Commentary on Ibn al-Yāsamīn (Sharḥ al-Yāsamīniyya) = Commentary on Poem called Ibn al-Yāsamīn's [Poem] on Science of Algebra (Sharḥ `alā'l-urjūza al-musammāt bi'l-Yāsamīniyya fī `ilm al-jabr) - Beirut (233/3), Berlin (5966-5967, 5967a-c; IGMN I, 1), Cairo (majlis 703/7, riyāḍa. 181/14-15, 314, 331, 626, 657), Calcutta (1476), Istanbul (SM AS 2752), London (Sup. 753/3), Kazan (1703/6), Philadelphia (1492-1493), Princeton (Yehuda 327, 340, 4230). Description of the Berlin manuscripts: Ahlwardt [1] (329-330). Revision of the commentary (No 783, M11) by Ibn al-Hā'im on the treatise (No 521, M1) of Ibn al-Yāsamīn.

M10. Light of al-Maridīnī on Commentary on Ibn al-Yāsamīn (al-Lum`a al-māridīniyya fī sharḥ al-Yāsamīniyya) - Aleppo (IHAS 88/1, 122), Berlin (5968-5968a), Cairo (falak 4004//2, 109, 10969, majlis 39/19, 472/7, 690/1, riyāḍa. 51-53, 54/1, 89/1, 302/1, 303, 311, 656, 659, 792, 813, Taymūr riyāḍa. 151, 196), Calcutta (1476), Gotha (1475), Istanbul (SM Laleli 2738), London (Sup. 353/3), Paris (4162/4), Princeton (Yehuda 3051, 4304). Description of the Berlin manuscripts: Ahlwardt [1] (330-331). Description of the Gotha manuscript: Pertsch [3] (113). Abridgement of M9.

M11. Gift of al-Maridīnī on Commentary on Ibn al-Yāsamīn (al-Tuḥfa al-Māridīniyya fī sharḥ al-Yāsamīniyya) - Cairo (majlis 39/16, riyāḍa. 362). Another abridgement of M9.

M12. Gift to Friends (Book of Delight) on the Science of Arithmetic (Tuḥfat al-aḥbāb (Kitāb al-Nuzha) fī `ilm al-ḥisāb) = Gift to Friends on Arithmetic Operations (Tuḥfat al-aḥbāb fī `amal al-ḥisāb) - Alexandria (ḥisāb 5), Berlin (5994), Cairo (falak 7601, 23015, riyāḍa. 351/1, 352, 747, Fāḍil riyāḍa. 7, Ṭal`at riyāḍa. 105/1, Taymūr riyāḍa. 198), Gotha (1486), Hyderabad (riyāḍa. 11), Istanbul (SM AS 2752/2, Laleli 2704/1), Jerusalem (Khalidi 20), Paris (6541/2), Princeton (Yehuda 5039), Kazan (1263). Description of the Berlin manuscript: Ahlwardt [1] (345). Research: Chalhoub [1]. Treatise in 3 chapters: 1) multiplication of integers, 2) division of integers, 3) fractions.

M13. Abridgement of "Gift to Friends on the Science of Arithmetic" (Mukhtaṣar Tuḥfat al-aḥbab fī `ilm al-ḥisāb) - Princeton (Yehuda 467). Abridgement of M12.

M14. Opening Mysteries in the Science of Inheritance (Kashf al-ghawāmiḍ fī ʿilm al-farāʾiḍ) - Alexandria (Far. 3), Algiers (1329), Berlin (4726), Cairo (majlis 144/5), Gotha (1109), Paris (870).

M15. Majestic Gifts of Predictions of Inheritance (al-Mawāhib al-saniyya fī aḥkām al-waṣiyya) - Berlin (4764), Cairo (majlis 144/1), Paris (5093).

M16. Commentary on [Poem of] al-Rahbi (Sharḥ al-Rahbiyya) - Alexandria (Far. 9, 15), Algiers (1326), Berlin (4694-4695), Damascus (60/10), Escorial (192/3), Gotha (1113-1114), Heidelberg (91, 394), Hyderabad (II 1156/32, 1434/669), Jakarta (Sup. 509-510), Princeton (2111/1), Rome (Vat. Sbath 1273). Commentary on the poem (No 493, M1) of al-Raḥbī on inheritance.

M17. Sunny Light on "Jerusalem Gift" (al-Lumʿa al-shamsiyya ʿalāʾl-Tuḥfa al-Qudsiyya) - Cairo (majlis 144/6), Gotha (1105, 1115). Commentary on the work (No 783, M21) of Ibn al-Hāʾim, an abridgement of poem (No 493, M1) of al-Raḥbī on inheritance.

M18. Essence of Arithmetic (Khulāṣat al-ḥisāb) - Beirut (237). The work was written in 1495.

M19. Explanation of "Important Sections on Inheritance for People" (Tashrīḥ al-Fuṣūl al-muhimma fī mawārīth al-umma) - Cairo (ʿulūm 19141), Paris (1037), Patna (1055), Rampur (I 23). Commentary on the work (No 783, M24) of Ibn al-Hāʾim on inheritance. Treatise in written in 1452.

M20. [Commentary on "Sufficient on Salvation "] - Cairo (ʿulūm 22292). Commentary on the work (No 783, M25) of Ibn al-Hāʾim on inheritance.

M21. [Abridgement of "Collection of al-Kallāʾī"] - Cairo (majlis 144/3). Abridgement of treatise (No 712, M1) of al-Kallāʾī on inheritance.

M22. [Commentary on "Collection of al-Kallāʾī"] - Cairo (majlis 144/4). Commentary on treatise of (No 712, M1) al-Kallāʾī on inheritance.

M23. Introduction to the Science of Arithmetic (al-Muqaddima fī ʿilm al-ḥisāb) - Dublin (3511/1).

M24. Pupil of the Eye on Proofs of Two Methods in the Science of Inheritance (Qurrat al-ʿayn fī bayān al-madhhabayn fī ʿilm al-farāʾiḍ) - Damascus (41/17); the complete title is mentioned in OALT and OM.

M25. Base of Algebra and Almucabala (Niṣāb al-jabr waʾl-muqābala) - is mentioned in OALT and OM.

M26. Specimens of Methods (Ṭirāz al-madhāhib) - is mentioned in OALT and OM.

M27. Aims of Pupils in Resolution of Arithmetic Problems (Maqāṣid al-ṭullāb fī istikhrāj al-masāʾil biʾl-ḥisāb) - is mentioned in A6.

A1. Zīj (Zīj) - Gotha (1381/2). Astronomical tables with introduction in 5 chapters.

A2. Collection on the Science of Astronomy (Majmūʿa fī ʿilm al-falak) - Cairo (Taymūr riyāḍa. 106/8, Hyderabad (I 67).

A3. Selection of Jewels in Determining Lines and Circles (Luqṭat al-jawāhir fī [taḥdīd] al-khuṭūṭ waʾl-dawāʾir) - Berlin (5693), Cairo (hay'a 25, majlis 286/2, mīqāt 126/3, 167/6, 168/3, 172/1, 182/2, 420, 482/2, 493, 558, 605, 613, 702/2, 705, 727, 997, 1093/6, Fāḍil mīqāt 10/3, 160, Ṭalʿat mīqāt 154/5, Zaki 566), Princeton (984; Yehuda 3442, 4086, 4103). Edition: Sibṭ al-Maridīnī [2]. Treatise on lines and circles on tympanums of astrolabes.

A4. Tables for Drawing Lines on Oblique Sundials by Two Threads by Easy and Beautiful Method without Outstripping (Jadāwil fī rasm al-munḥarifāt ʿalāʾl-ḥīṭān bi ṭarīq sahl ḥasan lam yusbaq ilayhi) - Berlin (oct. 3392/1; IGMN II 52), Cairo (falak 3995/2, 4007/2, 10971, mīqāt 133/2, 150/1, 151/1, 730/2, 800/2, Fāḍil mīqāt 53, 55, 180/2, Ṭalʿat mīqāt 174, Taymūr mīqāt 363, riyāḍa. 232/1), Oxford (I 434, II 286/3). Description of the Oxford manuscripts: Ruska and Hartner [1] (202). German translation: Schoy [24] (344-360). Research: Schoy [24]. Tables for drawing horary lines on oblique sundials.

A5. Means for Pupils on the Knowledge of Timekeeping by Reckoning (Wasīlat al-ṭullāb fī maʿrifat al-awqāt biʾl-ḥisāb) - Cairo (mīqāt 449, 596/1, Ṭalʿat mīqāt 91/2), Damascus (90, 1413), Munich (863), Oxford (II 286/4), Paris (2560/6), Princeton (Yehuda 4072), Rome (Vat. Sbath 358/2), Tehran (Senat 7572/3).

A6. Introduction to Reckoning Problems with Sines and Astronomical Operations (Muqaddima fī ḥisāb al-masāʾil al-jaybiyya waʾl-aʿmāl al-falakiyya) – Kabul (Matb. 32, 76), Munich (9862), Oxford (II 286/6).

A7. Treatise of Fatḥ al-Dīn (Shihāb al-Dīn) on Operations with the Sine [Quadrant] (al-Risāla al-Fatḥiyya (al-Shihābiyya) fīʾl-aʿmāl al-jaybiyya) - Alexandria (ḥisāb 51), Baku (B 4973/2, 5756/1), Beirut (208, 210), Berlin (5719, 5818, quart. 1170/3), Cairo (falak 3824/7, 3833/5, 3981, 4284, 4297/6, 10988/1, majlis 273/2, mīqāt 67, 80-81, 126/1b, 129/2, 176/2, 288, 567/1, 5-6, 567/1, 579-581, 702/1, 748/2, 766-767, 769/2, 782/2, 804/2, 1028/2, 1050/4, 1082/3, 1188/2, Fāḍil mīqāt 90, 91/2, 92, 171/3, 182/1, Kavala mīqāt 3/3, 6/5, Ṭalʿat mīqāt 83/3, 136/3, Taymūr majlis 177/5, 257/3, riyāḍa. 61, 64/4, 106/8, Zaki 786/6), Copenhagen (87/2),

Gotha (1417/3, 1419/2, 1421/2, 1422), Hyderabad (riyāḍa. 10, 67; Said. hay'a 18-19, 21), London (407/2), Mosul (304), Munich (861), Princeton (2006/11; Yehuda 861, 1066, 2334, 2888, 3126, 3442, 3792, 4103, 4205, 4464, 4585, 4759, 5924), Rabat (441, 2510-2512), Rome (Vat. Sbath 371), Tripoli (T 25/6, Um. 1123/3), Turin (64/4), Vienna (1420/1). Description of the Berlin manuscripts: Ahlwardt [1] (244-245). Edition: al-Jawi [1]. Treatise in 20 chapters.

A8. Treatise on Operations with the Sine Quadrant (Risāla fi'l-`amal bi'l-rub` al-mujayyab) - Cairo (mīqāt 582, 651/3, 937, Fāḍil mīqāt 171/2), Cambridge (Sup. 657/6), Escorial (II 931/1), Leiden (710/2, 951/11, 1001/3, 7081/7), Oxford (I 1041/4b), Rome (Vat. 318/3), St. Petersburg (Nat. 130/4), Tripoli (T 25/3), Vienna (Acad. 333),

A9. Questions on the Sine Quadrant (Maṭlab fi'l-rub` al-mujayyab) = Questions on Operations with the Sine Quadrant (al-Maṭlab fi'l-`amal bi'l-rub` al-mujayyab) - Algiers (612/7, 1457/4, 1460-1461), Cairo (majlis 844/7, mīqāt 146-147, 173/5, Fāḍil majlis 42/2, mīqāt 167/2, riyāḍa. 27/1, Khalīl mīqāt 10/6, Ṭal`at mīqāt 73/5, Taymūr riyāḍa. 102), Escorial (II 931/2), Göttingen (94/1), Gotha (1425), London (408/2, 6, 2619/3), Princeton (Yehuda 1170), Tripoli (Um. 1102/5). Edition: Sibṭ al-Maridīnī [3]. Treatise in 100 chapters.

A10. Treatise on Operations with the Quadrant (Risāla fi'l-`amal bi'l-rub`) - St. Petersburg (B 1450/2; Univ. 830/4), Paris (1425).

A11. Treatise on the Sine [Quadrant] (Risāla fi'l-jayb) - Tashkent (467/1).

A12. Treatise "al-Ṣāliḥiyya" for Obtaining Operations with (Perfection of) the Sine [Quadrant] (al-Risāla al-Ṣāliḥiyya fi taḥṣīl al-a`māl (al-kamāl) al-jaybiyya) - Cairo (Taymūr majlis 177/7), Princeton (Yehuda 4725), St. Petersburg (A 629/2).

A13. Treatise on Drawing Almucantar on the Tympanums of Astrolabes by Geometric Method (Risāla fi rasm al-muqanṭara wa ṣafā'iḥ al-asṭurlāb bi ṭarīq al-handasa) - Tashkent (467/2).

A14. Explanation of Mystery of Essence in Operations with Truncated Quadrant (Iẓhār al-sirr al-mawḍū ` fi'l-`amal bi'l-rub` al-maqṭū`) - Alexandria (ḥisāb 53/4), Baku (B 389/5, 2837/7, 4791/3), Cairo (Khalīl mīqāt 10/1, Zaki 786/15), Escorial (II 968/2), Leiden (710/3), Leipzig (812/4), Oxford (I 1041/4b), Rabat (2523), St. Petersburg (B 814/1), Sarajevo (137/10). Description of the Escorial manuscript: Derenbourg [7] (112-113).

A15. Sufficient for Satisfaction on Operations with Truncated Quadrant (Kifāya al-qanū` fi'l-`amal bi'l-rub` al-maqṭū`) - Alexandria (ḥisāb 55, 62, funūn 65-66), Baghdad (Sup. 343-344), Beirut (209, 211/1, 213/2), Berlin (1170, 5848-5849), Cairo (majlis 144/3, 323/1, mīqāt 119/1, 521/6a, 803, 1063/3, 1169/3, 1188/1, `ulūm 22292, Fāḍil majlis 180/5, mīqāt 165/3, 171/4, 199/1, Kavala mīqāt, 4, 6/3, 4, Ṭal`at majlis 179/5, mīqāt 77/2, 83/2, 101/2, Taymūr riyāḍa. 62/1, 106/7), Cambridge (Palm. 33-34), Copenhagen (86/6), Damascus (11359), Gotha (1426/9), Istanbul (Köprülü 347), Leipzig (883/10), Mahachqala (14/4), Oxford (I 971/7), Paris (2521/8, 2542/1, 4580/3), Princeton (2006-2007; Yehuda 964, 2888, 2969, 3126, 4464, 4582, 4759), Rome (Vat. Sbath 800), St. Petersburg (A 629/3, B 3691/1), Sarajevo (551/7, 672/8), Tehran (Mu`tamid 117/7; Univ. 933). Anonymous Turkish translation: Cairo (Kavala mīqāt 6/3). Edition: Sibṭ al-Maridīnī [1]. Abridgement of A14 in 15 chapters.

A16. Collection of Abridgements on Operations with the Almucantar Quadrant (Ḥāwī al-mukhtaṣarāt fi'l-`amal bi rub` al-muqanṭarāt) - Berlin (5850), Cairo (mīqāt 28, 521/12, 686-687, 1050/1, Fāḍil mīqāt 75, 170/1, Kavala mīqāt 6/2, Ṭal`at mīqāt 73/6, Zaki 390), Copenhagen (86/1), Escorial (II 913/6, 970/13), Hyderabad (riyāḍa. 185; Osm. 1352), London (Sup. 776), Princeton (Garr. 985; Yehuda 317/1), Tripoli (T 25/10, Um. 1101/7). Description of the Berlin manuscript: Ahlwardt [1] (259). Description of the Escorial manuscript: Derenbourg [7] (41-42, 121). Description of the first Princeton manuscript: Hitti, Faris, and `Abd al-Malik [1] (312). Treatise in 30 chapters.

A17. Abridgement of Treatise on Operations with the Almucantar Quadrant (Ikhtiṣār risāla fi'l-`amal bi rub` al-muqanṭarāt) - Berlin (5843), Cairo (Fāḍil mīqāt 97, mīqāt Turkī 6/8), Paris (2541/6), Tripoli (T 25/12). Description of the Berlin manuscript: Ahlwardt [1] (256).

A18. Core of Abridgements of Treatises on the Almucantar Quadrant (Lubb al-mukhtaṣarāt `alā rub` al-muqanṭarāt) - Escorial (II 968/9). Description of the manuscript: Derenbourg [7] (115-116).

A19. Indications on the Almucantar Quadrant (al-Ishārāt `ala rub` al-muqanṭarāt) - Escorial (II 968/4). Description of the manuscript: Derenbourg [7] (113-114).

A20. Pole of Brilliant [Stars] on Operations with the Almucantar Quadrant (Quṭb al-zāhirāt fi'l-`amal bi rub` al-muqanṭarāt) - Algiers (1460/2).

A21. Brilliant Stars on Operations with the Almucantar Quadrant (al-Nujum al-zāhirāt fi'l-`amal bi rub` al-muqanṭarāt) - Berlin (5851-5852). Abridgement of A20.

A22. Gardens in Full Bloom on Operations with the Almucantar Quadrant (al-Rawḍāt al-zāhirāt fi'l-`amal bi rub` al-muqanṭarāt) - Algiers (1457/4).

A23. Book of Gathering Flowers on Operations with the Almucantar Quadrant (Kitāb qaṭf al-zāhirāt fi'l-`amal bi rub` al-muqanṭarāt) - Paris (2547/17).

A24. Book of Gathering Flowers on Operations with the Protractor Quadrant (Kitāb qaṭf al-zāhirāt fi'l-`amal bi rub` al-dastūr) - Cairo (falak 4047).

A25. Right Direction of Acting (Asking on Operations) with the Perfect Quadrant (Hidāyat al-`āmil (al-sā'il fi'l-`amal) bu'l-rub` al-kāmil) - Alexandria (ḥisāb 59, 65, 70), Baghdad (Sup. 341), Berlin (5853-5854, quart. 1170/5, oct. 3392/1; IGMN II 10), Cairo (falak 3824/4, mīqāt 202, 455/2, 639/7, 742-743, 1169/4, riyāḍa. 363/2, Fāḍil majlis 180/4, mīqāt 97, Ṭal`at mīqāt 83/1, 254/2, Taymūr majlis 293), Cambridge (Palm. 37/36), Gotha (1472/2, 1428), Leiden (1101/18), Oxford (I 1041/4), Princeton (2006/15, Yehuda 470, 1066, 1865), St. Petersburg (Nat. 130/5), Tripoli (T 25/9; Um. 1106/2). Description of the Berlin manuscripts: Ahlwardt [1] (261-262), Ruska and Hartner [1] (180-181). Description of determining distances to non-available objects: Wiedemann [36] (60). Treatise in 20 and 15 chapters.

A26. Training Acting with the Perfect Quadrant (Tadrīb al-`āmil bi'l-rub` al-kāmil) - Escorial (II 968/8), Cairo (falak 4049/1, mīqāt 499/2, Ṭal`at majlis 179/4, Taymūr riyāḍa. 64/2), Mosul (304/3). Description of the Escorial manuscript: Derenbourg [7] (115). Treatise in 25 chapters.

A27. Introduction to [Training] on the Perfect Northern Quadrant (Muqaddima `alā'l-rub` al-shimālī al-kāmil) - Princeton (Yehuda 3442).

A28. Treatise on the Perfect Quadrant (Risāla fi'l-rub` al-kāmil) - Cairo (mīqāt 176/3, 453/2, 804/3, Fāḍil mīqāt 170/2, Ṭal`at mīqāt 83/1), Oxford (I 1401/4).

A29. Threading Pearls on Operations with the Northern Quadrant (Naẓm al-laālī fi'l-`amal bi'l-rub` al-shimālī) - Cairo (Fāḍil mīqāt 234).

A30. Concealed (Scattered) Pearls on Opearations with the Protractor Quadrant (al-Lu'lu' al-mastūr (al-manthūr) fi'l-`amal bi rub` al-dastūr) - Escorial (II 968/6 - under the first title), Princeton (Yehuda 3442 - under the second title). Description of the Escorial manuscript: Derenbourg [7] (114-115).

A31. Pearl Beads (Thread) on Operation with the Crescent-Shaped Quadrant (`Uqūd (Naẓm) al-la'ālī fi'l-`amal bi'l-rub` al-hilālī) - Cairo (mīqāt 138), Manchester (311/5).

A32. Treatise "al-Ṣāliḥiyya" on Operations with the North-Eastern (Truncated) Quadrant (al-Risāla al-Ṣāliḥiyya fi'l-`amal bi'l-rub` al-sharqī al-shimāli (al-maqṭū`) - Cairo (Taymūr majlis 177/6), St. Petersburg (A 629/1), Princeton (Yehuda 4725, before A15).

A33. Subtleties of Ingenuity on (Operations with) the Quadrant whose Pole is at the end of Altitude Arc (Laṭā'if al-ikhtirā` fi'l(-`amal bi'l)-rub` alladhī quṭbuhū min ṭaraf qaws al-irtifā`) - Cairo (mīqāt 537, 596/2), Paris (2547/18).

A34. Exhaustive Treatise on "Breast of Goose" and "Wing of Raven" (Risāla al-istī`āb li'l-`amal bi ṣadr al-iwazza wa janāḥ al-ghurāb) - Cairo (mīqāt 135/3, Taymūr riyāḍa. 287). Description of the first manuscript: Kunitzsch [1] (38). Treatise on two astronomical instruments.

A35. Book of the Bride on Memorable Operations (Kitāb al-`arūs fi'l-`amal al-maḥfūẓ) - Algiers (1457/4).

A36. Gift to al-Mansur - Concise [Book] on Determining the Qibla and Prayer Times (al-Tuḥfa al-Manṣūriyya al-Mukhtaṣara fī ma`rifat al-Qibla wa awqāt al-ṣalawāt) - Cairo (falak 4028, Ṭal`at mīqāt 77/1), London (421/2), Paris (2519/7), Princeton (994). Description of the Princeton manuscript: Hitti, Faris, and `Abd al-Malik [1] (314).

A37. List of Questions and Answers Concerning the Determination of Prayer Times (Ṣūrat su'āl wa jawāb tata`allaq bi ma`rifat mawāqīt al-ṣalāt) - Princeton (1960).

A38. Treatise on Equatorial Circle (Risāla fī dā'irat mu`addil al-nahār) - Oxford (I 1041/4).

A39. Treatise on the Quadrant, Astrolabe, and Calendar (Risāla fi'l-rub` wa'l-asṭurlāb wa'l-taqwīm) - Florence (320).

A40. Treatise on Operations with the Astrolabe (Risāla fi'l-`amal bi'l-asṭurlāb) - Sarajevo (551/6).

A41. [Commentary on "Folios on Operations with Quadrant of Circle on which Almucantars Are Imaged"] - Cairo (Fāḍil mīqāt 97). Commentary on the work (No 775, A4) of al-Maridīnī.

A42. Treatise on Construction of the Sine Quadrant for [All] Horizons (Risāla fī a`māl al-rub` al-mujayyab al-āfāqi) – Kabul (Matb. 30).

A43. Treatise on Operations of Timekeeping and Determining Azimuths (RIsāla a`māl al-awqāt fī istikhrāj al-sumūt) – Kabul (Matb. 31).

A44. Pupil of Observer on the Knowledge of Position of Lines of Surplus of Turn (Qurrat al-nāẓir fī ma`rifat waḍ` khuṭūṭ faḍl al-dā'ir) - Cairo (mīqāt 762, Fāḍil mīqāt 147-148), Kabul (Matb. 32).

A45. Mighty Victory in Position of [Lines of] Surplus of Turn (Fatḥ al-qādir fī waḍ` faḍl al-dā'ir) - Rabat (2315).

A46. Treatise on Operations with the Moon if Stars Are Covered by Clouds (Risāla fi'l-`amal bi'l-qamar idhā al-najm bi'l-ghaym istatar) - Tripoli (T 25/11).

A47. Determining the Distance of the Direction of Surplus of Turn from the Line of Meridian of the City (Istikhrāj bu`d samt faḍl al-dā'ir `alā khaṭṭ zawāl al-balad) - Tehran (Senat 7572/17).

A48. Introduction to Determining Boundaries (Muqaddima fī ma`rifat al-ḥudūd) - Princeton (Yehuda 3442).

A49. Treatise on Timekeeping (Risāla fi'l-mīqāt) - Mahachqala (1183/2).

A50. More Accurate Definition of Measuring at the End of Sine [Line] of Quadrant (Taṣḥīḥ al-misāḥa fī ṭaraf al-jayb min al-rub`) - is mentioned in OALT and OM.

874. CYRIACUS

Cyriacus (15th c.), Christian astronomer from Syria.

A1. Zīj (al-Zīj) - Oxford (Laud. 253). Research: Saliba [2, 3a].

875. `ALI AL-HUSAYNI AL-ISFAHANI

Mīr Ghiyāth al-Dīn `Alī ibn `Alī Amīrān al-Ḥusaynī al-Iṣfahānī (Ṣahānī) (15-16th c.), from Isfahan, scholar-encyclopaedist, mathematician, and astronomer, worked in Badakhshan.

See: KZ (V 609), MAA (201), MAMS (II 522-523), PL (II 10-11, 75, 357-358, 404), STMI (333, 396, 554-555, 603-604).

E1. Book of Knowledge on the World (Dānish-nāma-yi jihān) P - Aligarh (Azad `Abd al-Salam 734/58), Berlin (353), Bukhara (239), Calcutta (652, 713, 1363), Cambridge (187, Browne Sup. 470, M. 1), Delhi (3028), Hyderabad (riyāḍa. 31/9, 471; Salar `ulūm 5-9), Lahore (Univ.), London (982/1, II 439/2, Sup. 16829, Edw. 09; Ind. 718, 2173-2174), Manchester (Lind. 686/1), Mashhad (563-564), Oxford (1456), Patna (905), St. Petersburg (C 595), Tehran (Majlis; Malik, Sipahsalar). Edition: al-Ḥusaynī al-Isfahānī [1]. Research: Chandpuri [1]. The work contains chapters on cosmology, meteorology, mineralogy, psychology, anatomy, botany, metrology; was written in 1467 in Badakhshan.

M1. Pearl of Measurement (Durra al-misāḥa) P - Calcutta (Curz. 397, 572), Hyderabad (Salar riyāḍa. 7). Treatise is dedicated to Tīmūrid prince Sultan Mahmud Ghazi, governor of Mazandaran.

A1. Steps of Achievement in Astronomy (Ma`ārij al-wuṣūl fi'l-hay`a) P - Oxford (I 86/4).

A2. Education of the Calendar (Ma`ārif al-taqwīm) P - Oxford (1542).

A3. Essence of Astronomy and Proof of Calendar (Khulāṣat al-tanjīm wa burhān al-taqwīm) P - Najaf (Husayn).

A4. Uses of Stars (Fawā'id al-nujūm) P - Tehran (1233/7, 2395/3).

876. BADR AL-DIN AL-TABARI

Badr al-Dīn al-Ṭabarī (15-16th c.), from Tabaristan, astronomer.

See: MAMS (III 17), STMI (298).

A1. Commentary on "Thirty Chapters" (Sharḥ-i Sī faṣl) = Commentary on "Concise [Treatise] on the Knowledge of Stars" (Sharḥ-i mukhtaṣar dar ma`rifat al-nujūm) P - Aligarh (Azad. `Abd al-Ḥayy 44), Hyderabad (Osm. 286, 462), London (Sup. 7700). Najaf (Nadi), Rampur (1178), Tabriz (Milli 3477), Tashkent (444), Tehran (193, 2147). Commentary on the works (No 606, A16 and A17) of al-Ṭūsī.

A2. Treatise on Altitude (Risāla dar irtifā`) - Mashhad (5878/9), Tehran (6594/31; Sipahsalar 2911/18; Univ. 1846/1).

877. MUHAMMAD IBN MANSUR

Ṣadr al-Dīn Muḥammad ibn Ghiyāth al-Dīn Manṣūr al-Ḥusayni al-Dashtakī al-Shīrazī (1425-1498), mineralogist; worked in Diyarbakır at the court of Uzun Hasan (1466-1478), the Amir of Akkoyunlu.

See: MAMS (II 563), PL (II 451-452).

Mi1. Sultan Book on Jewels (Gawāhir-nāma-yi sulṭānī P - Istanbul (NO 7363; SM AS 3611, Fatih 3568, Laleli 1706, Şehit 1824), London (Sup. 158, Ellis M 270; Ind. 2778), Oxford (1877), Paris (805-806, 2376-2377),

Tehran (711), Vienna (1448). Editions: Ibn Manṣūr [2- 3]. Partial German translation by Hammer-Purgstall: Ibn Manṣūr [1]. Treatise on Mineralogy.

878. `ALI AL-ZAMZAMI

`Alī ibn Muḥammad ibn Ismā`īl al-Zamzamī al-Makkī (15th c.), from Mecca, mathematician and astronomer.

See: GAL (II 229), GAL² (II 230), MAA (185), MAMS (II 523), SSM (76), STMI (359).

M1. Victory of Granting - Poem on Arithmetic (Fatḥ al-wahhāb manẓūma fi'l-ḥisāb) - Cairo (Taymūr riyāḍa. 138). Poem was written in 1473.

M2. Guide to the Art of Ghubar (al-Murshida fī ṣinā`at al-ghubār).

A1. Treatise on Determining the Beginnings of Months by the Visibility of the [Crescent] (Risāla fī ma`rifat awā'il al-shuhūr bi'l-ruy`a) - Cairo (Taymūr riyāḍa. 138/1), Hyderabad (majlis 11/17).

879. `ARAFA AL-FARADI

Zayn al-Dīn `Arafa al-Faraḍī (15th c.), Egyptian mathematician (al-faraḍī = specialist in inheritance).

See: SSM (76).

M1. [Commentary on Poem of al-Zamzamī] - Cairo (riyāḍa. 56). Commentary on poem (No 878, M1) al-Zamzamī.

880. YUSUF IBN QURQMAS AL-HAMZAWI

Yūsuf ibn Qurqmās al-Hamzawī Amīr al-Ḥājj al-Ḥalabī (15th c.), Syrian leader of the pilgrimage to Mecca (amīr al-ḥājj) from Aleppo; astronomer.

See: MAMS (III 22), SSM (78-79).

M1. Book of Great Sexagesimal Ratio (Kitāb al-nisba al-sittīniyya al-kubrā) - Cairo (Taymūr riyāḍa. 119). Research: King [15] (409). Multiplication table in sexagesimal figures on 600 folios. Photo-reproduction of a page: SSM (311).

A1. Pearls of Required (al-Durr al-maṭlūb) - Istanbul (SM Laleli 2713).

A2. Treatise on Determining the Position of Lines of Surplus of Turn and Arcs of `Aṣr, the Remainder from It to Sunset, and on Equal and Season Hours by Constant Gnomons (Risāla fī ma`rifat waḍ` khuṭūṭ faḍl al-dā'ir wa qisiy al-`aṣr wa'l-bāqī minhu li'l-ghurūb wa'l-sā`āt al-mustawiyya wa'l-zamāniyya bi'l-a`mida al-thābitā) - Cairo (Fāḍil mīqāt 93/3, Ṭal`at mīqāt 102/3).

881. HABIBALLAH AL-SUNGHURI

Ḥabīballāh ibn al-Ḥusayn al-Sunghurī (d. 1492), mathematician, worked in Aleppo.

See: MAMS (II 523).

M1. Introduction to Elements of Geometry (Muqaddima fī uṣūl al-handasa) - Princeton (Yehuda 4350). Commentary on Euclid's "Elements".

882. `ABD AL-RAHMAN JAMI

Nūr al-Dīn `Abd al-Raḥmān ibn Aḥmad Jāmi al-Naqshbandī, mawlanā (1414-1492), famous Persian poet, philosopher and mystic; born in Khirjird, in the district Jam near Herat; lived and died there: He belonged to the Naqshbandiyya order of Sufism; was the teacher of Uzbeki poet Niẓām al-Dīn `Alī Shīr Navā`ī (1441-1501), who became the vizier of Husayn Bayqara (1469-1506) the Tīmurid ruler of Khurasan. He extended his protection to Jāmi.

See: GAL (II 207), GAL² (I 493-494), PL (I 954-959, II 413-414, III 183-185, 256); Ye. Berthels [6, 8], Browne [1], Hikmat [1], Huart [4] (EI), Huart and Massé [1] (EI²). Memorial collection: "Jāmi" [1].

Mu1. Treatise on Music (Risāla-yi mūsīqī) P - Calcutta (612), Oxford (894), Paris (1676), Patna (180/19), Vienna (Acad. 2010). Russian translation: Jāmi [7].

L1. [Poems] P. Persian edition: Jāmi [2]. Tajiki transcription of selected poems: Jāmi [4]. Russian translation of selected poems: Jāmi [3]. Separate poems: a) Salamān and Absal (Salamān wa Absal), b) The Precious Pearl (al-Durra al-fakhīra), c) Yūsuf and Zulaykha (Yūsuf wa Zulaykha). Editions with English translations of (a)

by Fitzgerald and Arberry: Jāmi [1, 6]. Russian translation of (a): Jāmi [9]. English translation of (b): Jāmi [10]. Russian translation of (c): Jāmi [5].

883. YAHYA IBN ALI AL-RIFA`I

Yaḥyā ibn `Alī al-Rifā`ī (al-Zimā`ī) al-Shāfi`ī (15-16th c.), Ottoman astronomer. Translated the Zīj of al-Tūsī (No 606, A8) into Arabic; worked in Cairo.

See: MAMS (III 21), OALT (225-226).

A1. Ta`rīb Zīj Ulugh Beg. - Baghdad (Al-Matḥaf al-`Irāqī 10276), Bursa (Genel 1797/1), Cairo (Dar al-Kutub mīqāt 756, Talat majlis 425/6, Kavala mīqāt 1/1), Edirne (Selimiye 4724/1), Istanbul (Selim Ağa 728, SM Esad Efendi 1993), Konya (Mevlana Müzesi 2908/1), Paris (2534). (In adition to those stated above 11 manuscript copies are mentioned in OALT).

884. YUSUF AL-QITTAJI AL-MIQATI

Jamāl al-Dīn Yūsuf ibn Ṭūghān al-Qiṭṭājī al-Mīqātī (15th-16th c. ?), Ottoman mathematician and astronomer.

See: GAL² (II 1025), MAMS (III 22), OALT (228-229), SSM (79).

M1. Delightful Thoughts on the Knowledge of Situation with Prices (Nuzhat al-afkār fī ma`rifat aḥwāl al-as`ār) - Alexandria (ḥurūf 17/3), Cairo (mīqāt 74, 1210/2).

M2. Book of al-Mīqāti (Kitāb-i Mīqātī) P - Tunis (Nat. 18020).

A1. Section on Knowledge of the Setting of the Moon and its Rise Approximately in any day (Faṣl fī ma`rifat mughīb al-qamar wa ṭulū`ihī taqrīban fī kull yawm) - Cairo (Fāḍil mīqāt 167/4).

A2. Muqaddima b. Ma`rifa Iṣlāḥ Qirā'at al-Taqwīm- Murad Buhari 262/7

885. `ATAALLAH `AJAMI

`Aṭāallāh `Ajamī (15th c.), scholar; astronomer and mechanic.

See: KZ (I 867, III 402), MAMS (III 12).

A1. Treatise on the Sine Quadrant (Risalat rub` al-mujayyab) - is mentioned in KZ (I 867). Commentary (No 893, A2) by al-Akhwin.

A2. Commentary on treatise on sine Quadrant (Sharḥ risāla fi'l-rub` al-mujayyab) – is mentioned in KZ (III 402).

Me1. Treatise on Weights (Risāla fi'l-awzān) - is mentioned in KZ (III 372).

886. AL-HADI ILA'L-HAQQ

Al-Hādī ilā'l-Ḥaqq `Izz al-Dīn ibn al-Ḥusayn ibn al-Mu'ayyad (1441-1494), Yemeni astronomer.

See: MAY (40).

A1. Poem mentioning Greek Months (al-Sharīda ilā dhikr shuhūr al-Rūm) - Berlin (5871), Rome (Vat. 1139/3). Poem on Solar months and Lunar stations.

887. `ALI AL-SHARIF AL-HUSNI

Nūr al-Dīn `Alī ibn `Abd al-Qādir al-Faraḍī al-Sharīf al-Ḥusni al-Shāfi`ī (15th c.), Egyptian mathematician.

See: SSM (76).

M1. Great Uses in Solutions of the Unknown [Magnitudes] in "Mean" (al-Fawā'id al-jalīla fī ḥall majhūlāt al-Wasīla) - Cairo (falak 4023/1).Commentary on the work (No 783, M3) of Ibn al-Hā'im.

M2. Use in Determining the Establishment by Two Errors (Fā'ida fī istikhraj al-aqārīr bi'l-khaṭa'ayn) - Cairo (`aqā'id 3964/13). Treatise on solution of problems of inheritance by double-false position.

M3. Useful Knowledge of Dinar and Dirham, and Instruction on Golden Tax (Fā'ida fī ma`rifat al-dīnār wa'l-dirham wa naṣb zakāt al-ḍhahab) - Cairo (`aqā'id 3964/14).

888. SHAMS AL-DIN AL-SUFI AL-MISRI

Shams al-Dīn Muḥammad ibn Abī'l-Fatḥ al-Ṣūfī al-Miṣrī (d. ca 1494), from Egypt, astronomer.

See: GAL (II of ed. of 1902 128-129), GAL² (II 159), KZ (III 560, 566), MAA (185, 189), MAA³ (176-177), MAMS (II 523-526, 548, III 41), OALT (116-126), SSM (58, 82-84).

M1. Direction for Operations with Irrational Roots for those who do not have a clear Understanding (Irshād al-`ajam li-a`māl al-judhūr al-aṣamm) - Cairo (riyāḍa 663).

M2. Useful on Commenting Fragment on Exterior Kind of Division (Fā'ida fī sharḥ qiṭ`a fī jins khārij al-qisma) - Cairo (Fāḍil mīqāt 209/3).

A1. Simplification of the Zīj of Ulugh Beg (Tashīl zīj Ulugh Beg) = Zīj of al-Sufi (Zīj al-Ṣūfī) - Cairo (mīqāt 125/6, 179/1, 618, 639/25, Fāḍil majlis 8/3 - incomplete), Edirne (Selimiye 630/2), Gotha (1379), Istanbul (Süleymaniye 1037/12, Kandilli 398), Salé (Subayḥiyya 38/3), Tehran (Milli 768). Description of one Cairo manuscript: Kunitzsch [1] (20). Revision of zīj (No 816, A1) of Ulugh Beg and its re-calculation to the latitude of Cairo; probably the coordinates of fixed stars are coordinated with the work (No 212, A1) of al-Ṣūfī.

A2. Ephemerides of Seven Planets (Taqwīm al-kawākib al-sab`a) - Alexandria (ḥisāb 46). Another revision of zīj (No 816, A1) of Ulugh Beg.

A3. Zīj (al-Zīj) - Jerusalem (Khalid. 14).

A4. Treatise on Operations with the Sine [Quadrant] (al-Risāla al-shamsiyya fī'l-a`māl al-jaybiyya) - Aleppo (Ahmadiya 1319) Berlin (5817), Damascus (Zahiriyya 9242, 10076), Cairo (mīqāt 595, 617/2, 1027, 1028/1, Ṭal`at mīqāt 254/6, Taymūr majlis 227/16), Istanbul (SM Laleli 3680/16), Leiden (1001/4), Abbas Azzawi (11220/1). Description of the Berlin manuscript: Ahlwardt [1] (243-244). Treatise in 16 chapters plus introduction.

A5. Introduction to the Position of the Plane called Sundials by Geometric Method (Muqaddima `alā waḍ` al-basīṭa al-musammāt bi'l-rukhāma bi ṭarīq al-handasa) = Book on the Construction of the Plane called Sundials by Geometric Method (Maqāla `alā `amal al-basīṭa al-musammāt bi'l-rukhāma bi ṭarīq al-handasa) -Berlin (IGMN II 31), Cairo (mīqāt 588/1, Ṭal`at mīqāt 103/1, 178/4), Istanbul (NO 2946/8), Izmirli (Milli 50/152-8). German translation: Schoy [24] (337-342).

A6. Method of Reckoning Oblique [Sundials] and their Drawing in the Equinoctial Direction (Ṭarīqat ḥisāb al-mā'ila wa rasmihā bi samt al-i`tidāl) - Cairo (mīqāt 5/2, 732/2, Fāḍil mīqāt 178/4, Ṭal`at mīqāt 102/2).

A7. Book of Jewels on the Knowledge of Azimuth and Surplus of Turn (Kitāb al-jawāhir fī ma`rifat al-samt wa faḍl al-dā'ir) - Oxford (I 1040).

A8. Detailed Treatise on Operations with Equatorial Semicircle (al-Risāla al-mufaṣṣala fī'l-`amal bi niṣf dā'irat al-mu`addil) - Cairo (mīqāt 181/8, 879/2, Fāḍil mīqāt 169/1, Zaki 706/4), Leiden (710/1), Rabat (449/10).

A9. Treatise on Operations with the Winged Quadrant in the Science on [Celestial] Spheres, Right Operations with the Winged Quadrant (Risāla fī'l-`amal bi'l-rub` al-mujannaḥ fī `ilm al-falak, al-`amal al-muṣaḥḥaḥ bi'l-rub` al-mujannaḥ) - Berlin (5844). Description of the manuscript: Ahlwardt [1]. (256-257). Research: Schmalzl [1] (111).

A10. Treatise on Operations with the "Box of Sapphires" (Risāla fī'l-`amal bi ṣundūq al-yawāqīt) - Berlin (5845). Description of the manuscript: Ahlwardt [1] (257).

A11. On Perfect Quadrant (Fī'l-rub` al-kāmil) - Escorial (II 931/3).

A12. Delight of the Observer on Position of Lines of Surplus of Turn (Nuzhat al-nāẓir fī waḍ` khuṭūṭ faḍl dā'ir) - Berlin (5716), Cairo (mīqāt 196, 452/2, Fāḍil mīqāt 61/2, 67/1, 231), Istanbul (NO 2904/3, Hamidiye 874/3). Description of the Berlin manuscript: Ahlwardt [1] (184). Treatise on drawing horary lines on tympanums of astrolabes.

A13. Support for those who Possess Minds in the Knowledge of Astrological Operations by Arithmetic without Obstacle (`Umdat dhawī al-albāb fī ma`rifat istikhrāj al-a`māl al-falakiyya bi'l-ḥisāb bi ghayr ḥijāb) - Escorial (II 931/4), Princeton (Yehuda 3442), .

A14. On Ascensions, Latitude, and Longitude of the Moon and the Crescent (Fī maṭāli` wa ṭūl wa `arḍ al-qamar wa'l-hilāl) - Escorial (I 926/5).

A15. Treatise on Reckoning Positions of Verticals and Almucantars (Risāla fī ḥisāb mawāqi` al-sumūt wa'l-muqanṭarāt) - Cairo (Fāḍil mīqāt 27/1).

A16. Stairs of Minaret on Stoppings of Planets (Sullam al-mināra fī muqawwamāt al-kawākib al-sayāra) - Algiers (1465), Cairo (mīqāt 308, 475, 639/2, Fāḍil mīqāt 136, Taymūr riyāḍa. 231), Gotha (1405), Istanbul (Topkapı Hazine 540). Tables of the movement of planets.

A17 Results of Reflections on Conjunctions with the Moon (Natā'ij al-fikr fi'l-mubāshara bi'l-qamar) - Cairo (mīqāt 201), Manchester (361/R).

A18. Table for Determining the Surplus of Turn (Jadwal li istikhrāj faḍl al-dā'ir) - Cairo (falak 4024/2). Tables with introduction in 7 chapters containing application of the work (No 812, A1) of Ibn al-Mushrif.

A19. Achievement of the Aim in Operations with the Moon (Bulūgh al-watar fi'l-`amal bi'l-qamar) - Cairo (mīqāt 19, 201 - anonymous), Escorial (II 931/5), Manchester (361/K). Description of the Escorial manuscript: Derenbourg [7] (41).

A20. Easy and Pleasant Operations with the Raised Plane (al-Sahl al-mumti` fi'l-`amal bi'l-basīṭ al-murtafi`) - Manchester (361/R).

A21. Tables of Second Resolution by Principles of Ulugh Beg (Jadāwil al-maḥlūl al-thānī `alā uṣūl Ulugh Beg) - Princeton (Yehuda 3349).

A22. Tables of Equations of the Moon (Jadāwil ta`ādīl al-qamar) - Princeton (Yehuda 3349, before A21).

A23. Note on Aid in Determining the Arc of Divergence (Nubdhat al-is`āf fī ma`rifat qaws al-khilāf) - Cairo (falak 4033/1, mīqāt 640/1). Treatise on calculation of the ephemerides of planets.

A24. Desire of Pupils to be Victorious in Obtaining the Foundations of Astronomy by Arithmetic (Munyat al-ṭullāb fī taḥṣīl ghālib al-qawā`id al-falakiyya bi'l-ḥisāb) - Cairo (Ṭal`at mīqāt 91/3). Treatise on timekeeping.

A25. Table of Horizontal Turn (Jadwal al-dā'ir al-āfāqī) - Cairo (Fāḍil mīqāt 132 - anonymous, only the second half), Oxford (944).

A26. Extreme Extent of Ordering Operations with the Table of Sexagesimal Ratio (Nihayat al-rutba fi'l-'amal al-nisba al-sittiniyya) – Oxford (I1042/3).

A27. The Right Way to Solve the Positions of the Moon by the "Incomparable Pearl" (al-Ṣirāṭ al-mustaqīm fī ḥall muqawwamāt al-qamar min al-Durr al-yatīm) - Cairo (falak 4031/1, mīqāt 468/2). Application of the work (No 815, A19) of Ibn al-Majdī to problems of the movement of the Moon.

A28. Book on Operations with the Plane called Sundial by Geometric method (Maqāla `ala `amal al-basīṭa al-musammāt bi'l-rukhāma bi ṭarīq al-handasa) - Cairo (mīqāt 588/1).

A29. Section on Oblique [Sundial] which was Installed on the Cupola of the public [Mosque] al-Muayyadiya in 824 h. (Faṣl fi'l-munḥarifa bi'l-qubba allatī waḍa`ahā al-Mu'ayyadiyya `ām 824 h.) - Cairo (mīqāt 588/2). Treatise on the sundial constructed in Cairo in 1421.

A30. Two Tables for Drawing Oblique Sundials [with Inclination] 59°9' and 61°27' for Non-indicated Latitude (Jadwalān li-rasm munḥarifāt 59 9 wa 61 27 li-`arḍ ghayr madhkūr) - Cairo (Fāḍil mīqāt 191/1).

A31. al-`Amal al-Muṣaḥḥaḥ bi al-Rub` al-Mujannah. - Berlin (5844), Edirne (Selimiye 253/1), Manisa (2967/5), Meclis-i Şura-i Milli (9589/2).

A32. Jadwal Muqawwim al-Jawzahar li Tūl "nadna" `alā al-Raṣad al-Jadīd li Ulugh Beg. - Istanbul (NO 2929/7).

A33. Jadāwil fī al-Tanjīm. - Cairo (571).

A34. Al-Jawāhir al-Nayyirat fī al-`Amal bi Rub` al-Muqanṭarāt. - Madina (Arif Hikmet Majlis 233/4).

A35. Dustūr Yatazammanu Hisāb Kusūf al-Shams wāqi` fī Yawm al-Ithnayn 19 Shaban 934. - Istanbul (Köprülü 1619/25).

A36. Fā'ida fī Sharḥ Qit`a fī Jins Khārij al-Qisma. - Cairo (Fāḍil mīqāt 209/3).

A37. al-`Ilām bi Shadd al-Bankām. - Cairo (mīqāt 1169/7, 521/4, Fāḍil mīqāt 204/1), Istanbul (SM Hamidiye 874, Fatih 5397/4).

A38. al-Istī`āb fī al-`Amal bi Ṣadr al-`Iwazz wa Janāḥ al-Ghurāb. - Istanbul (Kandilli 38/3, Arkeoloji 586/4), Manisa (2967/4).

A39. al-Mufaṣṣil fī al-`Amal bi Nişf Dā'irat al-Mu`addil. - Baghdad (Awqāf 5500/9), Bursa (Haraççıoğlu 1180/4, 1180/17, 1210/3), Cairo (mīqāt 879/2, 181/8, Zekiyye. 706/4, Fāḍil Mīqāt 169/1), Istanbul (NO 2947/8; Kandilli 123/1; SM Fatih 5397/2, 5038/13, Mihrişah Sultan 327/9, Veliyuddin 3194/8, Bağdadlı Vehbi 2124/2), Konya (Yusuf Ağa 9887/9).

A40. Nihāyat al-Rutba fī al-`Amal bi Jadwal al-Nisba. - Baghdad (Awqāf Majmū` No . 5420/2), Cairo (Fāḍil mīqāt 240).

A41. Risāla fī Ma`rifat Waḍ` al-Jadwal al-Shāmil li Faḍl Dā'ir wa al-Sumūt. - Cairo (Fāḍil mīqāt 27).

A42. Zīj Muḥammad b. Abī al-Fatḥ al-Ṣūfī - Cairo (Fāḍil majlis 7/3), Gotha (1379), Istanbul (Hafīd Efendi 196), Jerusalem (Khalid. 14), Konya (Yusuf Ağa 9956), Leiden No 2802.

Me1. Treatise on Information about Clepsydras (Risālat al-i`lām bi shadd al-binkām) - Cairo (mīqāt 521/4, 1169/7, Fāḍil mīqāt 204/1), Istanbul (SM Fatih 5397/4, Hamid. 74/6), Rome (Vat. Sbath 539).

Me2. Treatise on Correcting the Defects of Lever Balance (Risāla fī iṣlāḥ fasād al-qabbān) - Berlin (IGMN IV 2 - a fragment), Cairo (falak 3831/5, riyāḍa. 748/1, 1102/2, Fāḍil riyāḍa. 28/2, 30/4).

Me3. Guide of the Weigher for Determing Weights by Lever Balance (Irshād al-wazzān li-ma'rifat al-awzān bi'l-qabbān) - Cairo (falak 3831/1, riyāḍa 748/1, Fāḍil riyāḍa. 30/3),

Me4. Treatise on Division of [Scale of] Lever Balance by Geometry, Measurement, and Reckoning by Ratios of Four [Magnitudes] (Risāla fī qismat al-qabbān bi ṭarīq al-handasa wa'l-misāḥa wa'l-ḥisāb bi'l-nisab al-arba') - Cairo (Fāḍil riyāḍa. 30/5).

Me5. Treatise on Division of [Scale of] Lever Balance by Arithmetic (Risāla fī qismat al-qabbān bi ṭarīq al-ḥisāb) - Cairo (riyāḍa. 30/5).

Me6. Gift for Observers on Construction of Criterion by Principle of Measurement (Tuḥfat al-nuẓẓār fī inshā al-'iyār min aṣl al-mi'yār) - Cairo (majlis 286/3). Treatise on weights and measures written in 1473.

889. MUSTAFA AL-QASTALANI AL-RUMI

Muṣṭafā al-Qasṭalānī al-Rūmī (d. 1495), Ottoman astronomer.

See: KZ (III 387), MAMS (II 526).

A1. Treatise on the Direction of Qibla (Risāla fī jihat al-Qibla) - is mentioned in KZ.

890. MAS'UD AL-SHIRWANI

Kamāl al-Dīn Mas'ūd al-Shirwānī (d. 1500), from Shirwan; scholar-encyclopaedist, taught at Gawharshad madrasa in Herat.

See: MAMS (II 526); Bakikhanov [1] (173), [2] (217), [3] (211).

E1. Commentary on "Wisdom of Source" (Sharḥ Ḥikmat al'ayn) - is mentioned by Bakihanov [2-3]. Commentary on the work (No 616, E1) of al-Kātibī al-Qazwīnī.

891. 'ALI IBN HIBATALLAH

'Alī ibn Hibatallāh ibn Muḥammad (15-16th c.), Ottoman mathematician and astronomer.

See: KZ (III 366), MAMS (II 526), OM (III 283), OMLT (33)

M1. Essence of Way in the Science of Arithmetic (Khulāṣat al-minhāj fī 'ilm al-ḥisāb) - is mentioned in OM.

A1. Treatise on Astrolabe (Risāla fī'l-asṭurlāb) - is mentioned in KZ.

892. SHAMS AL-DIN AL-IRBILI

Shams al-Dīn Abū 'Abdallāh Muḥammad ibn al-Sheikh al-Ṣāliḥ al-Wāri' ibn Abī'l-Ḥasan 'Alī al-Khaṭīb al-Irbīlī (15-16th c.) from Irbil; mathematician and musician.

See: IHS (III 746-748), KZ (VI 402), MAMS (II 526-527).

M1. Limit in the Science of Arithmetic for Pupils (Nihāyat al-ṭullāb fī 'ilm al-ḥisāb) - is mentioned in KZ.

Mu1. Jewels of Order in the Knowledge of Kindness (Jawāhir al-niẓām fī ma'rifat al-in'ām). Edition by Cheikho: al-Irbili [1]. Treatise was written in 1472.

893. MUHYI AL-DIN AL-AKHWIN (AHAVAYN)

Muḥyī al-Dīn Muḥammad ibn al-Qāsim al-Akhwīn (d. 1499), Turkish astronomer, taught in various madrasas of the Ottoman Empire.

See: KZ (I 478, II 196, III 363, 402, 408, 645), MAA (185), MAMS (II 527), OALT (64-66).

A1. Propositions (al-Ashkālāt) - Kütahya (Vahid Paşa 793), Manisa (1698/5), Vienna (1422). Treatise on astronomical propositions on seven planetary spheres, written for Sinan Pasha (No 858).

A2. Commentary on Treatise of 'Ataallah al-'Ajāmi on the Sine Quadrant (Sharḥ risālat 'Aṭā'allāh al-'Ajamī fī rub' al-mujayyab) - is mentioned in KZ (III 402). Commentary on (No 885, A1) of al-'Ajami.

A3. Risāla fī l-'Amal bi'l-Kura al-Musammāt bi Dhāt al-Kursī –Cairo (Fāḍıl mīqāt 106/2), Istanbul (SM Yazma Bağışlar1353/4, Bağdadlı Vehbi 2023/3, 2123/6, Laleli 2135/4, Hacı Mahmud 5688/6, IU. Veliyuddin 3194/4), Princeton (Suppl. 243).

A4. Hawāshī 'alā Sharḥ Qāḍī-zāda 'ala'l-Mulakhkhaṣ- Manisa (1697).

894. JAMAL AL-DIN AL-DAWWANI

Jamāl al-Dīn Muḥammad ibn As`ad al-Dawwānī al-Ṣiddiqī (1423-1501), from Dawwan near Qadharun, philosopher and scholar-encyclopaedist; he was a judge, also taught at a madrasa in Shiraz.

See: GAL (II 281-284), GAL^2 (II 306-309), KZ (I 90, 202-203, 208-209, 298, 425, 465, 484, II 26, 51, 196-197, 200-201, 361, 365-366, 376, 480, III 320, 367-368, 372, 377, 387, 392-394, 419-421, 430, 440, 544, IV 41, 77, 134, 170, 212, 217, 550, 569, V 295, 341, 417, VI 177, 240, 261, 505), MAMS (II 527), PL (I 1273, II 474), PL^2 (II 845-846), STMI (485); Aliqulov [3], B. Siddiqi [1].

E1. Specimen of Sciences (Unmūdhaj al-`ulūm) - Berlin (72/4), Cairo (VI 181, VII 617), Hyderabad (majlis 32-35), Patna (2592), Rampur (698/9, 10), Vienna (1451). Encyclopaedical treatise containing chapters on mathematics, astronomy, and natural sciences. Part of mathematical chapter on perfect numbers is quoted in "The Bowl of Darwish" (No 1058, E1) of al-`Āmili (Shawqy [4], 170).

M1. Treatise on Letters (Risālat al-ḥurūf) P -Tashkent (2908/19). Description of the manuscript: SVR (V 252). Treatise on alphabetical numeration and numerical meaning of letters.

A1. Spiritual Gift (Tuḥfa-yi rūḥānī) P - Berlin (5/1). Treatise on the significance of letters in astrology.

PH1. Jalalian Ethic (Akhlāq-i Jalālī) P. Edition: al-Dawwānī [1]. English translation: Tompson [1]. Partial Russian translation by Aliqulov: "Materialy" [2] (472-487). Research: Aliqulov [1]. Revision of "Nasirean Ethic" (No 606, PH1) of al-Ṭūsī.

895. SULAYMAN AL-BUKHARI

Sulaymān ibn Muḥammad al-Ḥusaynī al-Ḥanafī al-Bukhārī (15-16th c,), from Bukhara, astronomer.

See: STMI (355).

A1. Reasoning on More Precise Determining Azimuth of Qibla (al-Qawl fī taḥqīq `amal samt al-Qibla) - Hyderabad (riyāḍa. 195). Treatise was written in 1492 in Mecca.

896. JALAL AL-DIN AL-SUYUTI

Jalāl al-Dīn Abū'l-Fadl `Abd al-Raḥmān ibn Abī Bakr ibn Muhmmad al-Suyūṭī (1445-1505), from Suyut (Asyut, Egypt) famous theologian and jurist, was also historian and physician, worked and died in Cairo.

See: GAL (II 180-204), GAL^2 (II 178-198), HMA (II 298-301), KZ (I 42, 61, 147, 150-154, 156-158, 162-163, 166, 171, 183, 190-191, 213-214, 222-224, 234, 237, 244-245, 253, 261-266, 270, 276, 284-287, 297, 313, 319, 323, 343, 348-349, 352, 360-361, 364-365, 369-372, 376-378, 386, 391, 405, 408, 414, 417-420, 428, 433, 441-445, 456, 461-462, 467, 474, 481, 490-491, 499, II 3-9, 27-30, 35, 40-43, 46, 50, 53-54, 63-67, 94, 110, 128-131, 149, 176-177, 182, 186, 190, 209-210, 222, 225, 231, 237-238, 242, 248, 268, 271, 277-279, 286, 290, 297-300, 309, 317-319, 321, 326, 345-346, 358, 368, 375, 388-390, 413, 418, 422, 425, 429, 437, 441-442, 452-454, 458, 478, 482, 490, 493, 530, 547-550, 575-576, 580, 590, 598, 601, 608, 613-614, 617, 622, 627, 632-634, 651, 659-660, III 4, 12-14, 18, 33, 39, 47, 66-70, 74-75, 109-111, 116, 124, 128-130, 140-141, 173, 179, 184, 188-189, 192-193, 196, 202, 208, 213, 218-219, 223, 230, 239-240, 248, 260, 278, 286, 332, 336-338, 350, 356, 367, 392, 416, 447, 464, 471-475, 483-487, 490-491, 507, 517, 523, 529, 539-542, 545, 572, 575, 580, 587, 606-607, 612, 616, 621-623, 626, 631-632, 642-646, IV 5-7, 16, 19-21, 31, 34-36, 39, 43, 50, 53, 59, 64, 70, 80-81, 85-86, 89, 95, 111-113, 116-118, 120-122, 132-134, 138-139, 145-146, 149-153, 156-158, 167, 172-175, 184, 187, 194, 197, 208, 211, 221, 237-239, 268, 271, 273, 282, 295, 321, 344, 347-349, 372, 377, 387, 399, 410-411, 420-423, 452-455, 464, 471, 479-483, 486, 492, 506, 522, 551, 562-567, 570, 582-586, V 29, 32, 146, 176, 204, 207-214, 217, 221, 235, 241-243, 255, 264-265, 288-289, 305, 308, 320, 328, 331, 335-336, 343-344, 352, 356-358, 361, 367, 372, 380, 395, 401, 415, 476, 489, 492, 497, 500-507, 512, 523-525, 530, 535, 538, 541, 573-575, 589, 592-594, 602, 617, 620-621, 624, 627, 657-659, VI 6, 12, 32, 49, 55, 101-102, 108-110, 142, 147, 151, 156, 161, 170, 182, 190, 203, 207, 219-221, 224-225, 229-231, 239, 246-248, 259, 262-265, 276, 281, 285, 290, 298, 302-304, 319-320, 324, 328-329, 333, 336, 342-343, 351, 354-356, 359-360, 366, 369, 372, 381-386, 390-393, 403, 410-411, 424-429, 432, 435-436, 442, 447, 466, 472, 498, 504-507, 510, 514-516, 593, 665-679), MAA (186), MAMS (II 528-529), PL (II 230), SSM (84-85), STMI (600); Brockelmann [15] (EI), Heinen [5] (ENWC), Karahan [2] (IA), Seybold [1].

HS1. Desire to Keep in Memory the Classes of Linguists and Grammarians (Bughyat al-wu`āt fī ṭabaqāt al-lughawiyīn wa'l-nuḥāt). Editions: al-Suyūṭī [3, 5].

E1. Cleaning (al-Nuqāya) - London (Ind. 1029). Encyclopaedia of 14 sciences.

E2. Completion of Knowledge (Itmām al-dirāya) - Leiden (410), Patna (2231). Editions: al-Suyūṭī [1].

E3. Book of Means for the Knowledge of "Principles" (Kitāb al-wasā'il ilā ma`rifat al-Awā'il) - Calcutta (Buhar 456/1). Abridgement of the work (No 279, E1) of al-`Askarī.

A1. Selected Astronomy (Muntakhab al-hay`a) - St. Petersburg (B 1632/1).

A2. Majestic Astronomy on Islamic Astronomy (al-Hay`a al-saniyya fi'l-hay`a al-sunniyya) - Baku (A 551), Beirut (200), Berlin (5697-5698, 5698a-d), Cairo (Ṭal`at hay'a 37, Zaki 594), Gotha (52/4, 1383), Istanbul (SM AS 2680-2683), London (Ind. 1035/4), Mahachqala (225/9, 267, 614/8, 1222/3, 1404/3, 1910/15, 2061), Munich (133), Paris (4253/3), Princeton (Yehuda 3294, 3866), Kazan (1036), St. Petersburg (B 2479/2, 3548), Tripoli (Um. 1121). Description of the Berlin manuscripts: Ahlwardt [1] (173). Edition with English translation and commentary by Anton Heinen: al-Suyuṭī [6]. Research: Heinen [4].

A3. Treatise on Astronomy (Risāla fi'l-hay`a) - Zakataly (330, 380/10).

A4. [Treatise on Predictions of Eclipses] - Cairo (Kavala majlis 25/114).

A5. [Treatise on Sunrises and Sunsets] - Cairo (Kavala majlis 25/115).

A6. Poem on the [Time of Prayer] Ẓuhr (Manẓūma fī ma`rifat al-ẓuhrayn) - Cairo (Fāḍil majlis 39/3).

A7. Deliverance from Doubts in Sine [Quadrant] (Kashf al-rayb `an al-jayb) - is mentioned in KZ (V 207).

G1. Deliverance from Shock at Description of Earthquakes (Kashf al-salsala `an waṣf al-zalzala). Russian translation and research by Bunyatov and Iskenderov - al-Suyuṭī [7].

H1. Ordering Information on the Essence of Things (Naẓm al-`iqyān fī a`yān al-a`yān). Edition by Hitti: al-Suyuṭī [4]. Book on the distinguished men of his time, the "Who is Who of 15th century", containing information on scholars.

H2. Beauty of Communications on Information on Egypt and Cairo (Ḥusn al-muḥā ḍara fī akhbār Miṣr wa'l-Qāhira). Edition: al-Suyuṭī [1].

PH1. Philosophical treatises. The most popular among numerous theological treatises of al-Suyuṭī is the Treasury of Rulers on Authenticity of Traditions in Speeches and Works (Kanz al-`ummāl fī thubūt sunan al-aqwāl wa'l-af`āl). Edition: al-Suyuṭī [2].

897. AHMAD AL-BISTAMI

Aḥmad ibn Mūsā al-Bisṭāmī (end of 15th c.), astronomer.

See: MAMS (II 529), STMI (291).

A1. Treatise on Observations (al-Risāla fi'l-raṣad) - Patna (2469/9). Treatise was written in 1465.

898. HUSAYN AL-BAYHAQI AL-KASHIFI

Kamāl al-Dīn Ḥusayn al-Wā`iẓ ibn `Alī al-Bayhaqī al-Kāshifī (d. 1505), from Bayhaq near Marw, brother-in-law of poet Jāmi (No 882) and friend of poet Nawayi, worked in Nishapur, Mashhad, and Herat; compiled the commentary on the Qur'an; also an astronomer.

See: KZ (I 199, 204, II 230, 319, 360, 363, 641-642, III 43, 421-422, 461-462, 500-501, IV 485, V 239, 352, 376, 466, 483, VI 244, 280-281, 643), MAMS (II 530), PL (I 12-13, 212-213, 1261, II 78-79, 459-461, 474, III 185, 262-263), PL^2 (126-131), SSM (159); Arnold [1] (EI), [2] (IA), Browne [4] (441-443, 503-504), Yousofi [1] (EI^2).

A1. Radiances of the Moon (Lawā'iḥ al-qamar) = Radiances of the Moon on Choise of Hours (Lawā'iḥ al-qamar dar ikhtiyār-i sā`āt) P - Baku (B 3177), Berlin (IGMN III 5), Bombay (Firuz 68), Cairo (Ṭal`at mīqāt 7, 9, 16), Cambridge (Browne List 1384), Hyderabad (riyāḍa. 10, 47, 67, 89), Isfahan (Adab.), Istanbul (NO 2798), Jaipur (91), London (Ind. Ross 15), Mashhad (148-149, 5375, 5612-5616, 7283; Mawlawi 561/1; Mishkat 1035), Oxford (1553-1555), Paris (903), Qazimiya (Mahfuz 197), Rayy (`Abd al-`Azim 161), Tashkent (460/1, 8312/4), Tehran (203-204, 2723, 3014; Dehhuda 267, Malik 6295, Sipahsalar 249/1, 7425, Univ. 825, 2035, 2800, 3067/1, 3174, Adab. 256, 4511, Ilah. 116/3, 414, 424, 431, 545/2, 566, Huquq 222, 246, 302), Yazd (Waziri 478). Description of the Oxford manuscripts: Sachau and Ethé [1] (939). Description of the Tashkent manuscripts: SVR (VI 116, VIII 83-84).

A2. Mirror of Iskandar (Āīna-yi Iskandarī) P - Mashhad (11; Mawlawi 1308/2).

A3. Core of Selected on Determining Times (Lubāb al-ikhtiyārāt fī ta`yīn al-awqāt) P - Cairo (Ṭal`at falak fārisī 7/1, 16). Turkish translation by Mustafa Hisan - Caito (Ṭal`at falak fārisī 40/1).

PH1. Philosophical Treatises: a) Ethics of Muhsin (Akhlāq-i Muḥsinī) P, b) Treatise on Hatim (Risāla-yi Ḥātimiyya) P. Editions: al-Kāshifī [1-2]. Russian translation of fragments by Aliqulov: al-Kāshifī [3].

899. NIZAM AL-DIN AL-HUSAYNI

Niẓām al-Dīn ibn Ḥabīballāh al-Ḥusaynī (second half of 15th c.), astronomer.
See: KZ (II 83), MAMS (II 530).
A1. [Commentary on "Twenty Chapters on the Astrolabe" of al-Ṭūsī] - is mentioned in KZ. Commentary on the work (No 606, A14), was written in 1468.

900. KHATTABI AL-HUSAYNI

Khaṭṭabī al-Ḥusaynī (15-16th c.), Ottoman physician, mathematician, and astronomer.
See: KZ (II 226), MAMS (II 531), OMLT (47).
M1. Gift of Arithmetic (Tuḥfat al-ḥisāb) P - is mentioned in KZ.

901. MIR HUSAYN YAZDI

Mīr Ḥusayn Mubadī Mu`ayyin al-Dīn Yazdī (d. 1515), from Yazd, Iranian mathematician.
See: MAMS (II 531).
M1. Super-commentary on "Exposition of Euclid" (Ḥāshiya àlā Taḥrīr Uqlīdis) - Tehran (Sipahsalar 1058). Super-commentary on the work (No 606, M1) of al-Ṭūsī.

902. QASIM ISFAHANI

Qāsim Asīrī Iṣfahānī (15-16th c.), from Isfahan, mathematician, worked in Baghdad.
See: MAMS (II 531).
M1. [Treatise on Arithmetics] - Tehran (Univ. 4257). Treatise was written in 1495 in Baghdad.

903. SHAMS AL-DIN AL-TIZINI

Shams al-Dīn Abū `Abdallāh Muḥammad ibn Muḥammad ibn Shams al-Dīn ibn Taqī al-Dīn al-Ḥalabī al-Tīzīnī (15-16th c.), born in Aleppo, timekeeper of the Great Mosque in Damascus.
See: GAL (II 160), GAL² (II 484), MAA (186), MAMS (II 531-532, III 370), SSM (79-80).
M1. [Sine Tables] - Oxford (I 1035/2).
M2. Table of Sexagesimal Ratio for Astronomical Operations to Hundred Twenty (Jadwal al-nisba al-sittīniyya fī'l-a`mal al-falakiyya ilā mi'a wa `ishrīn) - Oxford (I 1039/1). Description: King [15] (406-407). Sexagesimal multiplication table for m and n, m=1, . . . , 120, n=1, . . . , 60.
A1. Table of Fixed Stars for End of Year 940 of Hijra (Jadwal al-kawākib al-thābita li- ākhir sanat 940 min al-hijra). Edition by Hyde as appendix to his edition of zīj (No 816, A1), Ulugh Beg [2].
A2. [Table of Correspondence of Solar and Lunar Years until the Year 1000 of Hijra] - Paris (2521).
A3. Concise Treatise on Operation with the Quadrant of Circle on Which Fold Almucantars Are Located (Risāla mukhtaṣara fī'l-`amal bi rub` al-dā'ira al-mawḍū ` `alayhi al-muqanṭarāt al-maṭwiyya) - Berlin (5803), Cairo (Taymūr majlis 257/2), Gotha (1421/1), Oxford (I 967/9), Paris (2547/9). Description of the Berlin manuscript: Ahlwardt [1] (235-236). Treatise in 12 chapters.
A4. Treatise on Almucantar Quadrant (Risāla fī rub` al-muqanṭarāt) - Cairo (Taymūr riyāḍa. 167). Treatise in 12 chapters.
A5. Concise Treatise on Operation with the Quadrant of Circle, on which Northern Almucantars Are Located (Risāla mukhtaṣara fī'l-`amal bi rub` al-dā'ira al-mawḍū ` `alayhi al-muqanṭarāt al-shimāliyya) - Cairo (Fāḍil mīqāt 187/1). Treatise in 16 chapters.
A6. Account on Operation with the Quadrant of Circle, on which Northern Almucantars Are Located (Malḥa fī'l-`amal bi rub` al-dā'ira al-mawḍū ` `alayhi al-muqanṭarāt al-shimāliyya) - Berlin (5804), Cairo (mīqāt 162 - anonymous). Two versions in 12 and 15 chapters.
A7. On the Science of Timekeeping (Fī `ilm al-waqt) - Berlin (3804). Description of the manuscript: Ahlwardt [1] (236).
A8. Treatise on the Knowledge of Quadrant [of Astrolabe] Shikkaziya for Astronomical Operations (Risāla fī ma`rifat rub` al-shakāziya li'l-a`māl al-falakiyya) - Paris (2547/16).
A9. [Treatise on] the Construction of the Sine Quadrant (Fī'l-`amal al-rub` al-mujayyab) - Paris (2547/22).

A10. Treatise on Operations with the Sine Quadrant (Risāla fi'l-`amal bi'l-rub` al-mujayyab) - Cairo (Fāḍil miqāt 245/3), Paris (2547/22). Two versions: Cairo Manuscript containing 12 sections (A10) and Paris manuscript containing 20 chapters (A10).

A11. The Perfect Quadrant (al-Rub` al-kāmil) - Oxford (I 967).

A12. Treatise on Operations with Tympanum [of Astrolabe] Zarqala (Risāla fi'l-`amal bi'l-ṣafīḥa al-zarqāliyya) - Paris (2547/19).

A13. Treatise on Operations with the Quadrant of Circle on which Sines are Located (Risāla fi'l-`amal bi . rub` al-dā'ira al-mawḍū ` fīhi al-juyūb) - Princeton (Yehuda 964). Description of the manuscript: Mach [1] (426). Treatise in 15 chapters plus introduction and conclusion.

A14. Useful Operations with the Arc of `Asr Located on Sine [Quadrant] (Fā'ida fi'l-`amal bi qaws al-`aṣr al-mawḍu` `ala'l-jayb) - Cairo (Taymūr riyāḍa 169/3).

A15. Jerusalem Gift (Tuḥfa al-Quds) - Cairo (miqāt 499/1).

904. AHMAD IBN MAJID

Shihāb al-Dīn Aḥmad ibn Mājid ibn Muḥammad al-Sa`dī (15th c.), born in Oman, well-known navigator; often identified with the Arab pilot who led the ships of Vasco de Gama from Malindi (Eastern Africa) to Calcutta (India) in 1498.

See: AGL (548-569), GAL (II 229-230), GAL² (II 230-231), MAMS (II 532-533), SSM (185-186); Bagrow [1], Maqbul Ahmad [5] (EI²), [6] (DSB), [11] (ENWC), Ferrand [2, 4, 8], Shumovskiy [1-3, 5, 8].

AGI. Book of Uses on Knowledge of Sea Science and Rules (Kitāb al-fawā'id fī ma`rifat `ilm al-baḥr wa'l-qawā`id) - Damascus (I 33-35), Paris (2292/1, 2559). Edition: Ferrand [1]. Edition with Russian translation and research by Khoury: Ibn al-Mājid [3]. Edition with Russian translation and research by Shumovskiy: Ibn al-Mājid [4]. English translation by Tibbets: Ibn Mājid [2]. Research: AGL (560-565), Shumovskiy [3-5], Tibbets [1-4]. Twelve "uses": 1) History of navigation, magnetic needle 2) properties of the pilot, 3) lunar stations, 4) rising winds, 5) previous geographers and astronomers, 6) sea routes, 7) astronomical observations, on distances between stars near the Polar star, 8) signs of the nearness of land, 9) sea coasts, 10) ten great islands, 11) monsoons, 12) islands and reefs in the Red Sea.

A1. Gift of Decisions (Tuḥfat al-quḍāt) - Cairo (miqāt 409/1 - anonymous), Paris (2292). A poem on determining the azimuth of Qibla.

G1. [Three Sailing Directions] - St. Petersburg (B 992). Reproduction of the manuscript: in "Mathematical Geography" [10]. Edition: Ibn Mājid [1]. Edition with Russian translation: Shumovskiy [1]. Portuguese translation: Shumovskiy [1-3].

905. AHMAD AL-HALABI

Aḥmad ibn Muḥammad ibn `Uthmān ibn Amīr Ghafla al-Ḥalabī (d. 1509), from Aleppo, mathematician.

See: MAMS (II 533).

M1. Commentary on "Delight of Pupils" (Sharḥ Nuzhat al-ṭullāb) - Princeton (Yehuda 3398/2). Commentary on the work (No 783, M6) of Ibn al-Hā'im.

906. AHMAD AL-TAFTAZANI

Aḥmad ibn Yaḥyā ibn Muḥammad ibn Sa`d al-Dīn Mas`ūd ibn `Umar al-Taftazānī (d. 1510), scholar-encyclopaedist, great-grandson of (No 772) Umar al-Taftāzānī, sheikh al-Islām of Iran, was put to death by the order of Safawid Shah Ismā`īl (1501-1524).

See: STMI (601).

E1. Smart Collection (Majma` al-nafīsa) - London (Sup. 488, 717).

907. ABU'L-SALAH AL-GHIYATHI

Abū'l-Ṣalāḥ Jābir ibn `Abdallāh al-Ḥājj al-Ghiyāthī (15th c.), Maghribi astronomer.

See: MAMS (III 18), SSM (140).

A1. Approximate Required on Equation of Planets (Muqarrib al-maṭālib fī ta`dīl al-kawākib) - Cairo (miqāt 1081/4), Istanbul (SM Beşir 6699/11), London (Sup. 9598/7). Description of the Cairo manuscript: Kunizsch [1] (99-100). Poem on movement of the Sun, the Moon, and the planets.

908. AHMAD IBN TAMIRBUQA

Shihāb al-Dīn Aḥmad ibn Tamīrbuqā or Timūrbāy (15th c.) (tamir = iron, buqā = bull), astronomer of Turkish origin; worked in Cairo.

See: GAS (VII 187), MAMS (III 15), SSM (79).

A1. Bright Lightning on Abridgement of "The Most Perfect [Book]" (al-Barq al-sāṭi` fī mukhtaṣar al-Bāri`) - Cairo (mīqāt 14, 946, Fāḍil mīqāt 13/2, Ṭal`at mīqāt 112), Damascus (3115, 8870), Istanbul (SM Fatih 3416), Kazan (1759), Tunis (Nat. 143). Abridgement of the work (No 353, A1) of Ibn Abīl-Rijāl.

A2. [Tables for the Sun and the Moon] - Cairo (mīqāt 639/27). Tables for longitude 54°55' of Cairo, based on the "Zīj of Ulugh Beg" (No 816, A1).

A3. Treatise on Knowledge of Lowest Events by Indications of Highest Objects (Risāla fī ma`rifat al-ḥawādith al-sufliyya min dalālāt al-ashkhāṣ al-`ulwiyya) - Cairo (ḥurūf 89/1, mīqāt 180/4, 1006/2 - both anonymous).

909. MUHAMMAD AL-JANNAD

Abū `Abdallāh Muḥammad ibn Muḥammad ibn `Abd al-Wahhāb Abī Muḥammad ibn `Abdallāh al-Jannād al-Anṣārī (15th c.), Moroccan astronomer.

See: SSM (141).

A1. [Prayer tables for Latitudes 31° and 30°] - Cairo (Taymūr riyāḍa. 338/2). Prayer tables for Miknas and Siljilmasa in Morocco.

910. `ALI IBN AL-MAGHRIBI

Abū'l-Ḥasan `Alī ibn al-Maghribī (15th c.), from Maghrib, mathematician.

See: GAL² (II 1020), MAA (203), MAMS (III 10), SSM (141).

M1. Plate of Installation (Lawḥ al-ḍabṭ) = Poem on Reckoning by Joints (Manẓūma fī ḥisāb al-`uqūd) = Poem on Reckoning by Fingers (Manẓūma fī'l-ḥisāb bi'l-yad) - Alexandria (ḥisāb 15/3), Cairo (falak 3957/4), Gotha (1495), Istanbul (BU 1088). Description of the Gotha manuscript: Pertsch [3] (120-121).

911. HAMZA IBN ARSLAN (HAMZA BALİ B. ARSLAN)

Ḥamza ibn Arslān (15th c.), Turkish mathematician.

See: OMLT (28-29) , SSM (170).

M1. Lamp of Tresures (Miṣbāḥ al-kunūz) T - Cairo (Ṭal`at riyāḍa. Turkī 10). The complete list is given in OMLT. Arithmetic treatise dedicated to Mahmud, son of Sultan Bayezid II (1481-1512).

912. ABU BAKR IBN AL-IMAM

Abū Bakr ibn al-Imām (15th c.), Egyptian astronomer.

See: SSM (80).

A1. Treatise of Horizons on Operations with Sexagesimal Ratio (Risāla āfāqiyya fī'l-`amal bi'l-nisba al-sittīniyya) - Cairo (mīqāt 495, 127/1, 128/1 – the last two manuscripts are anonymous), Princeton (Mach 5010 - anonymous). Treatise on spherical astronomy in 12 or 13 chapters.

913. MUHAMMAD IBN GHAZI AL-`UTHMANI AL-MIKNASI

Abū `Abdallāh Muḥammad ibn Aḥmad ibn Muḥammad ibn `Alī ibn Ghāzī al-`Uthmānī al-Miknāsī (1437-1513), born and died in Miknas near Fas, mathematician.

See: GAL (II 311), GAL² (II 337-338), MAA (186), MAA³ (177), MAMS (II 533), SSM (141-142).

M1. Building of Arithmetic (Binyat al-ḥisāb) = Desire of Reckoners (Munyat al-ḥussāb) - Beirut (232/2), Berlin (oct. 2953), Cairo (riyāḍa. 355), Escorial (II 933/2, 954/10, 964/14), London (420/1, 1005/4), Paris (2204), Rabat (442, 2437). Description of the Berlin manuscript: Wagner [1] (210). Descriptions of the Escorial manuscripts: Derenbourg [7] (45-46, 89, 107). Research: Souissi [7].

M2. Aim of Pupils and Explanation of "Desire of Reckoners" (Bughyat al-ṭullāb wa sharḥ Munyat al-ḥussāb) - Cairo (falak 4393, Fāḍil riyāḍa 4, Taymūr riyāḍa. 133/1), Escorial (II 933/3), London (Suppl. 9625), Rabat (2437), Tripoli (Um. 1094), Tunis (Nat. 18053). Edition: al-Miknasi [1]. Commentary on M1.

A1. Aim of Pupils on the Science of Astrolabe (Bughyat al-ṭullāb fi 'ilm al-asṭurlāb) - Algier (1459).

914. FASIH AL-DIN NIZAMI AL-KUHISTANI

Faṣīh al-Dīn Muḥammad ibn 'Abd al-Karīm Niẓāmī al-Kūhistānī (d. 1530), from Kuhistan; pupil of al-Qushjī (No 845), astronomy teacher of poet 'Alī Shir Naway; worked in Herat.

See: GAL (I 932), GAS (V 115), KZ (I 322, IV 114, 475), MAMS (II 533-534), SSM (185).

M1. Super-commentary on Commentary on "Propositions of Substantiation on Geometry" (Ḥāshiya 'alā sharḥ Ashkāl al-ta'sīs fi'l-handasa) - Berlin (5943), Cairo (riyāḍa. 58), Istanbul (NO 2910), Kabul (38), Manchester 359, 407), Princeton (1060), Tehran (Milli 582/7) - is quoted in KZ (I 322). Super-commentary on commentary (No 808, M2) by al-Rūmī on the work (No 655, M1) of al-Samarkandī written in 1474, dedicated to Nawayi.

A1. Key to "Twenty Chapters on the Knowledge of the Astrolabe" (Miftāḥ-i Bīst bāb dar ma'rifat-i asṭurlāb) P - Oxford (II 87), Tashkent (2691, 7553). Description of the Tashkent manuscript 2691: SVR (I 224). Commentary on the work (No 606, A14) of al-Ṭūsī, written in 1470, dedicated to Nawayi.

A2. Commentary on "Compendium on Astronomy" (Sharḥ al-Mulakhkhaṣ fi'l-hay'a) - Baku (B 3950), Princeton (1060). The work is quoted in KZ (VI 114). Commentary on the work (No 547, A1) of al-Jaghmīnī.

A3. Treatise on the Globe (Risāla al-kura) P - Istanbul (SM AS 4878/3).

A4. Treatise on the Knowledge of the Quadrant (Risāla dar ma'rifat-i rub') P - Tehran (Mahdawi 462/3; Univ. 3519/3, Ilah. 710/2).

A5. Occurence of Lights (Maṭla' al-anwār) - Tashkent (7553). Description of the manuscript: SVR (VIII 79-82).

A6. Super-commentary on Commentary of Kamāl al-Dīn al-Turkumānī on "Compendium on Astronomy" of Maḥmūd al-Jaghmīnī (Ḥāshiya 'alā sharḥ Kamāl al-Dīn al-Turkumānī li-Mulakhkhaṣ Maḥmūd al-Jaghmīnī fi'l-hay'a) - Kabul (Muz. 3).

A7. Super-commentary on Commentary of Qāḍī-zāda al-Rūmī on "Compendium on Astronomy" of al-Jaghmīnī (Ḥāshiya 'alā sharḥ Qāḍī -zāda al-Rūmī li-Mulakhkhaṣ al-Jaghmīnī fi'l-hay'a) - Cairo (hay'a 89, Kavala hay'a 3/2). Super-commentary on commentary (No 808, A1) of al-Rūmī and on the work (No 547, A1) of al-Jaghmīnī.

915. 'ABD AL-QADIR RUYANI

'Abd al-Qādir ibn Ḥasan Rūyānī Lāhījī (d. 1519), from Ruyan, Tabaristan, astronomer, pupil of al-Qushjī (No 845), worked in Herat.

See: MAMS (II 534-535), PL (II 78), STMI (276-277); Pingree [31] (EIr).

A1. Concise Book on the Knowledge of Calendar (Mukhtaṣar dar ma'rifat-i taqwīm) P - Aligarh (Azad. Habib 44/15), Gotha (2/6), Hamadan (Gharb), Hyderabad (riyāḍa. 308/2), Istanbul (SM AS 4878/4), Mashhad (5627, 6352; Gauharshad 559/3; Nawwab 24/1), Oxford (1542/1), St. Petersburg (A 267; Nat. Khan. 138/5), Tehran (2793/5, 2794/8; Mahdawi 353; Milli 894; Sipahsalar 633/2, 1997/48; Univ. 1997, 2636, Ilah. 895, Huquq 302/3).

A2. Gift to Nizam (Tuḥfa-yi Niẓāmiyya) = Forty Sections (Chihil faṣl) P - Najaf (Ordubadi), Kazan (7), Qumm (Tabrizi), Tehran (2412/6, 2421/5, 2435/1; Malik 6326/10; Univ. 2093/1, 2097/1, 3687/5). The first 30 chapters are a commentary on "Thirty Chapters" (No 606, A16) of al-Ṭūsī, the last 10 chapters are the continuation of this work.

A3. Gift to Nu'man (Tuḥfa-yi Nu'māniyya) P - Aligarh (Univ. 42/2), Baku (A 850/3), Hyderabad (riyāḍa. 532, Said. hay'a 7), Rampur (1179).

A4. Concise Zīj of Mirza (Zīj-i mulakhkhaṣ-i Mīrzāyi) P - Mashhad (Mawlawi 34/5; Univ. 282), Paris (790), Tehran (185; Mishkat 1108; Univ. 895, 947).

A5. Treatise on the Globe (Risālat al-kura) P - Istanbul (SM AS 4878/3).

916. AL-HUSAYN AL-ZAYDI AL-HUSAYNI

al-Sharīf al-Ḥusayn ibn Muḥammad ibn Yaḥyā al-Zaydī al-Ḥusaynī (15-16th c.), astronomer and astrologer.

See: MAMS (III 46), PL (II 78).

A1. Rule of Astrologers (Dastūr-i munajjimīn) P - Tehran (Malik 5498). Treatise in 15 chapters plus introducton and conclusion, written in 1486 and dedicated to Ṣafiy al-Dīn 'Isa.

917. HUSAYN AL-TUQATI (HUSAMUDDİN AL-TOKADİ)

Ḥusām al-Dīn Ḥusayn ibn ʿAbd al-Raḥmān al-Tūqātī Naʿlband-zāda (d. 1519 or 1539), from Tokat (Turkey), (naʿlband-zāda = son of a blacksmith); Turkish theologian, jurist, grammarian, also knowledgeable in physics.
See: GAL^2 (II 323), KZ (II 49, 197, III 364, 400, 408, 450, IV 278, VI 238), MAMS (II 535), OALT (25-26), SSM (159).
A1. (Concise) Treatise on the Rainbow (Risāla (mukhtaṣara) fī qaws quzaḥ) - Beirut (213), Berlin (5691), Cairo (Ṭalʿat majlis 429/14, Taymūr ḥikma 52/2), Cyprus (II. Mahmud 1648/3), Çorum (5073/2), Gaziantep (231/4), Istanbul (SM Halet Efendi 536/3, Hasan Hüsnü 1233/3, Laleli 2200/1, Amcazade Hüseyin 302/2, Kara Mustafa Paşa 373; Millet, Ali Emiri Arabi 2758/3). Edition by Cheikho: al-Tūqātī [1].

918. AL-HAJJI ATMAJA (HACI ATMACA)

Muḥyi'l-Dīn al-Ḥājjī Muḥammad ibn al-Ḥājjī Atmāja al-Kātib (15-16th c.), Turkish mathematician.
See: KZ (V 404), OM (III 252), MAMS (II 535-536), OMLT (29-31), SSM (170).
M1. Collection of Rules of the Science of Arithmetics (Majmaʿ-i qawāʿid-i ʿilm-i ḥisāb) = Collection of Rules (Jāmiʿ al-qawāʿid) T -Baku (B 1173), Budapest (török 0444), Cairo (Ṭalʿat riyāḍa. Turkī 7), Istanbul (Köprülü 341), St. Petersburg (A 1451), Sarajevo (1670). The complete list is given in OMLT. Research: Berkutov [1-2].
M2. Science of Arithmetic (ʿIlm al-ḥisāb) T - Budapest (török 0177).

919. MUHAMMAD AL-BURSAWI (EFE-ZADE)

Muḥammad ibn Ḥājjī Sulaymān Efe-zāde al-Bursawī (d. 1495), from Bursa (Turkey), Turkish astronomer, worked under Sultan Bayezid II (1481-1512).
See: MAMS (II 536), OALT (61), OM (III 252).
A1. Commentary on "Twenty Chapters" (Sharḥ-i Bīst bāb) P - Istanbul (Ayasofya 2641), Paris (783/6), St. Petersburg (A 261). Commentary on the work (No 606, A14) of al-Ṭūsī.

920. PIR MAHMUD SARAFI

Pīr Maḥmūd Ṣarafī Efendī (15-16th c.), from Edirne, Turkish mathematician, worked in Istanbul under Sultan Bayezid II; pupil of Khalīl ibn Ibrāhīm al- Ḥusaynī (No 821), translated his teacher's work No M1 into Turkish.
See: MAMS (II 536), OM (III 257).

921. MUHAMMAD-SHAH FANARI-ZADE (FENARİ-ZADE)

Muḥyī al-Dīn Muḥammad-shāh ibn Aḥmad Fanārī-zāda "Shah Efendi al-Fanari" (d. ca 1525), Turkish astronomer; probably relative of philosopher al-Fanārī (No 806).
See: MAMS (II 536), OALT (55).
A1. Treatise (No 922, A1) is often attributed to him.

922. AJAM SINAN (ACEM SİNAN)

Sinān al-Dīn Yūsuf al-Barāʾī al-ʿAjamī known as "Acem Sinan" (15-16th c.) from Gandja (Azerbaijan); scholar, theologian, astronomer. On completing his education, he came to Anatolia and taught at several madrasas; was appointed as müderris to the Bayezid madrasa, then mufti to the town of Amasya at the time when Bayezid II was the governor of Amasya.
See: KZ (I 476, III 458), MAMS (III 22), OALT (54-55).
A1. Treatise on Indian Circle (Risāla fi'l-dā'ira al-hindiyya) - Ankara (Milli Kütüphane A. 1032/23), Bursa (Haraççıoğlu 1210/6), Istanbul (Fatih 5366/16, Bağdadlı Vehbi 2052/3, Süleymaniye 1037/30, Esad Efendi 3561/8, 3787/37, Laleli 2126/2, Reisülküttab 1210/3, Veliyuddin 3186/5,), Leiden (1135), Princeton (Yehuda 1066, 3091 - anonymous). Serez 3933/3. There is an anonymous commentary, Baku B 1459/2, 2315/12. Description of the Princeton manuscripts and their comparison with the Leiden manuscript: Mach [1] (426), this treatise is wrongly ascribed to Muḥammad-shāh ibn Aḥmad Fanārī-zāda (No 921).
A2. Treatise on Astronomy (Risāla fi'l-hay'a) - is mentioned in KZ (III 458).

923. ABRAHAM ZACUTO

Abraham ben Samuel ben Abraham Zacuto (1452-1522), Spanish Jew, born in Salamanca; astronomer.
See: SSM (140); Albuquerque [1] (DSB), Chábas [1] (ENWC).
A1. Perpetual Almanac (Almanach perpetuum) - Maghribi Arabic translation: Cairo (mīqāt 1081). Edition: Albuquerque [1]. Research: Vernet [1]. Cairo manuscript contains tables with three introductions, the first anonymous, the second translated from Spanish by Aḥmad ibn Qāsim al-Jaḥdarī al-Andalusī, the third written by al-Fāsī (No 1207).

924. ZAKARIYA AL-ANSARI

Zayn al-Dīn Abū Yaḥyā Zakarīyā ibn Muḥammad ibn Aḥmad al-Anṣārī (1423-1520), Ottoman scholar, born in Sanika, died in Cairo; philosopher, jurist, grammarian and mathematician.
See: GAL (II 122-124), GAL² (II 117-118), KZ (I 211, 222, 296, 408, 417, 474, 504, II 236, 270, 547, 611, III 8-9, 170, 403, 428, 490, IV 5, 19, 28, 170, 203, 224, 365, 373, 378, 432, 512, 533, 536, 552, V 39, 218, 300, 327, 345, 461, VI 78-79, 207, 209, 217, 246), MAA (187), MAMS (II 536-537), OMLT (49-51), SSM (76-77).
M1. Commentary on "Delight" (Sharḥ al-Nuzha) - Cairo (V 183). Commentary on treatise (No 783, M6) of Ibn al-Hā'im.
M2. Creative Victory in Commentary on "Sufficient" (Fatḥ al-mubdi` fī sharḥ al-Muqni`) - Berlin (oct. 3966), Birmingham (955, 1891-1892), Cairo (falak 4638, 17236, majlis 462/3, 472/3, riyāḍa. 181/13, 307, 613, 815, Zaki 778/1). The complete list is given in OMLT. Description of the Berlin manuscript: Wagner [1] (209-210). Commentary on treatise (No 783, M9) of Ibn al-Hā'im.

925. IBRAHIM AL-BAJALI (AL-BACALI)

Ṣarim (Ḥāzim, Burhān) al-Dīn Ibrāhīm ibn `Umar ibn Muḥammad al-Bajalī (d. 1520), Ottoman mathematician.
See: GAL² (II 94, 1021), MAMS (II 537), SSM (85), OMLT (51-52).
M1. Useful [Instruction] of Reckoning for the Beginner (Mufīd al-ḥāsib li'l-mubtadī al-rāghib) - Calcutta (1460-1461), Hyderabad (I 802/9), Kazan (110). Description of the Calcutta manuscripts: Hidayat Husain [1] (170-171).
M2. Proof of Researcher [Rule of] on Two Errors, Geometry, [Doctrine on] Quantities, Inheritance, Algebra, and Arithmetic (Burhān al-rā'id fī'l-jabr wa'l-ḥisāb wa'l-khaṭa'ayn wa'l-handasa wa'l-aqdār wa'l-farā'iḍ) - Cairo (funūn 470). Treatise on arithmetic and inheritance written in 1503.

926. MUHAMMAD AL-LADHIQI

Muḥammad ibn `Abd al-Ḥamīd al-Lādhiqī (15-16th c.), from Ladhiqiya (ancient Laodicaea); scholar of music, worked at the court of Ottoman Sultan Bayezid II (1481-1512).
See: MAMS (II 537); Farmer [4] (62), OMULT (18-22).
Mu1. Treatise of Victory (al-Risāla al-Fatḥiyya) - Mashhad (142), Tunis (Zaytuna). French translation: d'Erlanger [1] (IV 259-498).

927. MUHAMMAD AL-BILBAYSI IBN AL-`ATTAR

Muḥammad ibn Aḥmad al-Bilbaysī al-Shāfi`ī (Ibn al-`Aṭṭār) (15th c.) (ibn al-`aṭṭār = son of a perfumer); Egyptian astronomer.
See: SSM (77).
A1. Sufficient Knowledge of Surplus of Turn on Usual Horizons for the Enthusiast (Kifāyat al-mushtāq li-ma`rifat faḍl al-dā'ir fī sā'ir al-āfāq) - Cairo (mīqāt 442). Treatise in 10 chapters.

928. SUDUN AL-BASHTAKI

Sūdūn al-Bashtakī (15th c.), muadhdhin in Cairo.
See: SSM (77).
A1. [Abridgement of "Light of Pupil"] - Cairo (mīqāt 512). Abridgement of the work (No 812, A1) of Ibn al-Mushrif.

929. SAYYIDI IBN SUDUN

Sayyidī ibn Sūdūn (15th c.), Egyptian astronomer, perhaps son of Sūdūn al-Bashtakī (No 928).
See: SSM (77).

A1. Tables for Oblique [Sundials] Calculated for Hundred Degrees (Jadāwil al-munḥa-rifāt al-maḥsūba ilā ṣād daraja) - Cairo (mīqāt 534/3 - anonymous, 1170/1).

930. YAHYA IBN AL-JI`AN

Sharaf al-Dīn Abū'l-Baqā' Yaḥyā ibn al-Jī`ān (15th c), Egyptian finance officer.
See: GAL (II 38, 163), GAL² (26, 163), SSM (77).

M1. Ascensions of Moons in Transformation of Years and Months (Ṭawāli` al-budūr fī taḥwīl al-sinīn wa'l-shuhūr) - Cairo (mīqāt 105, 214), Istanbul (NO 4919; SM AS 2665). Treatise in 3 chapters on fiscal years, their relation to lunar years and their use in official documents.

931. YA`ISH AL-UMAWI AL-ANDALUSI

Abū `Abdallāh Ya`īsh ibn Ibrāhīm ibn Yūsuf ibn al-Sammāk al-Umawī al-Andalusī (15th c.), from Spain; mathematician and astronomer.
See: GAL (II 344), GAL² (II 155), KZ (V 247, 343, VI 242), MAA (187), MAMS (II 538, III 370), SSM (97), STIM (426); Sa`idan [17] (DSB).

M1. Removal of Difficulties in the Measurement of Figures (Raf` al-ishkāl fī misāḥat al-ashkāl) - Alexandria (ḥisāb 30; Mun. 5184/3), Berlin (5949), London (Sup. 511, 753/2).

M2. Signs of Relationship in the Science of Arithmetic (Marāsim al-intisāb fī ma`ālim (`ilm) al-ḥisāb) - Istanbul (SM Carullah 1509/1), London (Sup. 511, 753/1). Research: Sa`idan [25-26].

A1. Brilliance of Determining Ascension of Honours (Lawāmi` al-ta`rīf fī maṭāli` al-tashrīf) - Glasgo (Hunter 66/7).

Me1. Treatise on the Science of Lever Balance (Risāla fī `ilm al-qabbān) - Cairo (riyāḍa. 86/3).

932. ZAYN AL-DIN AL-JAWHARI AL-SALIHI

Zayn al-Dīn Abū Hurayra `Abd al-Raḥmān ibn Banafsha (ibn Muḥammad) al-Jawharī al-Ṣāliḥī al-Dimashqī (15th c.); timekeeper at the Umayyad mosque in Damascus.
See: GAL (II 160-161), GAL² (II 161), MAA (187), MAA² (180), MAMS (II 538), SSM (77-78), STMI (277).

A1. Threaded Pearls for the Simplification of the Calendar (al-Durr al-naẓīm fī tas'hīl al-taqwīm) - Berlin (5757), Cairo (falak 8526, mīqāt 20, 140, 909/5, 1006/1, 1110, Fāḍil mīqāt 168/6), Cambridge (Sup. 310), Gotha (1377/2), Leiden (80), Leipzig (811), Oxford (I 998, II 219, 288/2, 297), Princeton (Garr. 795). Description of the Berlin manuscript: Ahlwardt [1] (208-209). The work was written in 29 chapters as based on the zīj (No 816, A1) of Ulugh Beg.

A2. Brilliant Stars on Operations with the Sine Quadrant of a Circle (al-Kawākib al-zāhira fī'l-`amal bi jayb rub` al-dā'ira) - Paris (2521/9).

933. MUHAMMAD AL-QONAWI (AL-KONAVİ)

Muḥammad ibn Kātib Sinān al-Qonawī (d. 1524) from Konya (Turkey); mathematician, astronomer and politician; worked at the court of Ottoman Sultan Bayezid II (1481-1512); translator of the work (No 764, A1) of al-Khalīlī into Turkish.
See: GAL (II 302-303), KZ (II 235, VI 259, 499), MAA (187), MAMS (II 538-539), OALT (84-90), OM (III 309), SSM (170).

A1. Explanator of Times on Knowledge of Almucantars (Muḍīḥ al-awqāt fī ma`rifat al-muqanṭarāt) - Afyon (17606/1), Balıkesir (911/4), Bursa (Haraççıoğlu 1178/1, 1210/5), Damascus (Zahiriyya 573/1, 199), Cairo (falak 3824/3, mīqāt 573/1, Azhar 62), Jerusalem (Yehuda 677), Princeton (Garr. 2006/14), Istanbul (SM AS 2708, Mehmed Arif Mehmed Murad 49/5, Hacı Mahmud 5688/2, III. Ahmed 3481, Kadızade Mehmet 336, Reisülküttab 579/8, Carullah 1440/3, Tırnovalı 1857/4; Belediye Muallim Cevdet K. 259/3), Konya (Bölge Yazma Eserler 224/23), Tavşanlı (1754/2). Treatise on almucantar quadrants in 25 chapters dedicated to Sultan Bayezid II.

A2. Criterion of Stars (Mīzān al-kawākib) - Istanbul (SM AS 2710).

A3. Guide for Turkish Sultans on the Construction of Almucantar [Quadrants] (Hidāya al-muluk turkī fī waḍ' al-muqanṭarāt) T - Cairo (mīqāt Turkī 13/1, Fāḍil riyāḍa. 40/9, Ṭal'at mīqāt 102/5, 154/7, Taymūr riyāḍa. 109/2) -Istanbul (Univ. 1824/6; SM Hüsrev Paşa 236/4, Hacı Mahmud 5688/3, Çelebi Abdullah 307/7, Izmir 808/12, Carullah 1473/3, Atıf Efendi 1700/1; BU Veliyuddin 2317/7; Arkeoloji Müzesi 584), Konya (Mikail Bayram collection 1/6). In addition to those stated above 13 manuscript copies mentioned in OALT are quoted in KZ. Treatise on the construction and use of almucantar quadrant in 20 chapters, dedicated to Sultan Bayezid II (1481-1512).

A4. Treatise on the Astrolabe (Risāla-yi asṭurlāb) T - Konya (731/3).

A5. [Treatise on Determining the Azimuth of Qibla] - Konya (731/2).

A6. [Treatise on the Science of Stars] - Konya (731/5).

A7. [Treatise on Horizontal Sundials] - Cairo (falak 4059). Treatise in 16 chapters.

A8. Gift of Thinkers on the Science of Timekeeping by the Almucantar Quadrant of Circle (Tuḥfat al-fukarā fī 'ilm al-mīqāt min ṭarīq rub' dā'irat al-muqanṭarāt) - (II 235). Istanbul (SM Esad Efendi 3731/2) is quoted in KZ. (II 235). Treatise in 25 chapters dedicated to Sultan Bayezid II's son.

A9. Treatise on Drawing the Almucantar Quadrant (Risāla fī rasm rub' al-muqanṭarāt) - is mentioned in OM.

A10. Ajnāh al-Najāḥ. - Baghdad (al-Awqāf al-'āmma 12294).

A11. Al-Aṣl al-Mu'addil. - Istanbul (Arkeoloji Müzesi 1255/4).

A12. Faḍl al-dā'ir. - Istanbul (Arkeoloji Müzesi 1255/5).

A13. Hadiyya al-Ikhwān. - Cairo (4485, Ṭal'at majlis 366/4), Istanbul (SM Hasan Hüsnü 1286/1, Izmirli 492/2, Kandilli 163/1).

A14. Kitāb fī Ma'rifat Waḍ' al-Rukhāmāt li 'Arḍı "mā". - Cairo (4059).

A15. Risāla fī Ma'rifat Waḍ' Rub' al-Dā'ira al-Mawḍu'a 'alayhi al-Muqanṭarāt. - Baghdad (Awqāf 12294), Beirut (American University M 23 m A: MS 520), Istanbul (SM III. Ahmed 3485, Carullah 1473; Univ. TY. 1824/4; Kandilli 11, 27, 483; Arkeoloji 588; BU Veliyuddin 2284/5; Topkapı Hazine 458).

A16. Tabyīn al-Awqāt. -Istanbul (SM III. Ahmed 3501).

A17. Tarjamat Jadwal āfāqī. - Istanbul (SM Ayasofya 2590; Topkapı Hazine 1760/6).

A18. Tarjamat Risāla al-Jayb. - Istanbul (SM Ayasofya 2594).

934. MUSLIH AL-DIN IBN SINAN

Muṣliḥ al-Dīn ibn Sinān (15-16th c.), Turkish scholar, worked in Istanbul at the court of Sultan Bayezid II.

See: GAL (II 303), MAMS (II 540), ODMT (II, 176, 405-406).

Ph1. Platonic Treatise (Risāla Aflāṭuniyya) - Cairo. German translation: Wiedemann [26] (173-180). Treatise on determining specific weights ascribed to Plato (Aflāṭūn).

935. 'ABD AL-RAHMAN MUAYYAD-ZADA (MÜEYYED-ZADE)

'Abd al-Raḥmān ibn 'Alī Muayyad-zāda (d. 1516), philosopher and theologian.

See: KZ (II 111, 200, 366, III 93), MAMS (II 540), OMLT (47-49)

M1. Treatise on Rolling Sphere (Risāla fī'l-kura al-mutadaḥrija) - is mentioned in KZ (III 433).

Ph1. Treatise on the Indivisible Particle (Risāla fī'l-juz' alladhī lā yatajazza') - is mentioned in KZ (III 385).

936. MUHAMMAD AL-KHAFRI

Shams al-Dīn Abū'l-Ḥasan Muḥammad ibn Aḥmad al-Khafrī al-Kāshī (15-16th c.), born in Khafr near Firuzabad, worked in Kashan; Persian theologian, astronomer, and mathematician, pupil of Ahmad al-Taftazani (No 906). His name is also written as al-Khafarī, al-Ḥafrī, al-Ḥafari, al-Khiḍrī, al-Khuḍrī, and al-Khuḍarı in some manuscripts and in GAL, GAS, MAA, MAMS, SSM, and STMI..

See: GAL[2] (I 926), GAS (V 115), KZ (II 269, 479, VI 227), MAA (148), MAMS (II 471, 540). SSM (78), STMI (360); al-Khwansari (VII 194-197), Saliba [23] (16-18).

M1. Treatise on Resolving Difficulties which Occur in the Fifteenth Proposition of Euclid's "Elements" (Risāla fī ḥall al-ishkāl al-wārid 'alā'l-shakl al-khāmis 'ashar min Uṣūl Uqlīdis) - Tehran (1805, 4900/41).

A1. Complement of Commentary on "Memoir" (al-Takmila fi sharh al-Tadhkira) - Aligarh (Azad. `Abd al-Ḥayy 628/5, Habib 44/11, Sul. 160/20), Cairo (Taymur riyāḍa. 230), Calcutta (Buhar 351), Hyderabad (majlis 111, riyāḍa. 326; Osm. 343), Istanbul (SM Yeni Cami 791), London (Ind. 747), Oxford (I 1018), Patna (108, 2451), Princeton (Yehuda 1001, 1030), Rampur (hay'a 44), Tabriz (279), Tehran (1390). Description of the Calcutta manuscript: Hidayat Huseyn [1] (384-385). Research: Saliba [23]. Complement of commentary (No 788, A1) of al-Jurjānī on the work (No 606, A10) of al-Ṭūsī. In this work the Ptolemaic system of the Universe is critized. The work was written in 1525.

A2. Resolution of that which is not Solved (Ḥall mā lā yunḥallu) - St. Petersburg (Nat. ANS 596/2). Commentary on the work (No 606, A10) of al-Ṭūsī.

A3. [Commentary on Exposition of "Almagest"] - Rampur (I 428). Commentary on the work (No 606, A1) of al-Ṭūsī.

AG1. Limit of Comprehension on the Knowledge of Celestial Spheres (Nihāyat al-idrāk fi dirāya al-aflāk) = Ultimate Comprehension of Astronomy (Muntahā al-idrāk fi'l-hay'a) - Baku (M 99) - is mentioned by al-Khwansari under the first title; under the second title, al-Khwansari informs that (No 668, AG1) of al-Shīrāzī which bears the same title as the first title of this work is criticized.

937. MUHAMMAD IBN IYAS AL-CHIRKASI

Zayn al-Dīn (Shīhāb al-Dīn) Abū'l-Barakāt Muḥammad ibn Aḥmad ibn Iyās al-Nāṣirī al-Chirkasī al-Ḥanbalī (1448-1524), Egyptian historian and geographer of Circassian origin.

See: AGL (485-488), GAL (II 380), GAL^2 (II 405-406), KZ (I 516, II 26, 149, VI 323, 344-345), MAMS (II 540-541); Brinner [1] (EI^2), Sobernheim [1] (EI), [2] (IA),

AG1. Fragrance of Flowers on Marvels (Rarities) of the Universe (Nashq al-azhār fi `ajā'ib (gharā'ib) al-aqṭār) - Berlin (6050/1, oct. 3940), Cairo (`ulūm 160), Gotha (1518/9), London (385, Ind. 328), Oxford (I 914), Paris (2207-2211, 3513/3), St. Peterburg (B 1033; Univ. Kaz. 109), Tunis (Zaytuna). Partial edition by Langles: al-Chirkasi [1].

H1. Book of History of Egypt (Kitāb ta'rīkh Miṣr al-mashhūr bi hadā'i` al-zuhūr fi waqā'i` al-duhūr). Edition: al-Chirkasi [2].

938. NIZAM AL-DIN AL-BIRJANDI

Niẓām al-Dīn `Abd al-`Alī ibn Muḥammad ibn al-Ḥusayn al-Birjandī (d. 1525), worked in Isfahan at the court of Safawid Shahs Isma`il I (1501-1524) and Tahmasp I (1524-1576); astronomer and jurist.

See: GAL (II 591), KZ (I 210, II 269, IV 471, VI 114, 374), MAA (187-188), MAA^2 (180), MAMS (II 541-543), OALT (101-111), OMLT (55-56), PL (II 80-82, 135), SSM (159), STMI (275, 279, 339-340, 383), TIFI (136-137); Abdullayev and Ḥikmatullayev [1] (62-63), Babayev [1], Pingree [27] (EIr), Qary-Niyazov [2] (126-132), Matviyevskaya and Sokolovskaya [1] (45-46), Voronovskiy [2] (134).

M1. Commentary on "Sunny Treatise on Arithmetic" (Sharḥ` al-risāla al-shamsiyya fi'l-ḥisāb) - Calcutta (Buhar 339-340, 371/2), Hyderabad (Salar riyāḍa. 19), Istanbul (NO 2983), Jaipur (10), Mashhad (133; Univ. 339), Patna (4214-4215), Princeton (Yehuda 862), Rampur (I 53). The complete list is given in OMLT.

M2. Memoir for Friends on Explanation of Amicable [Numbers] (Tadhkirat al-aḥbāb fi bayān al-taḥābb) - Cairo (Kavala II 263).

M3. [Treatise] for Sharif (Sharifiyya) - Aligarh (Azad. Sul. 181/41). Commentary on abridgement of the work (No 845, M4) of al-Qushjī.

M4. On determining the Sine and Sagitta (Dar istikhrāj-i jayb u sahm) P-2nd chapter of A8. Russian translation by A. Ahmedov: al-Birjandī [1]. Trigonometrical Part of A8, containing exposition of determining sine of 1^{0} in (No 816, M1) of Ulugh Beg.

A1. Treatise on Astronomy (Risāla-yi hay`at) = Science of Astronomy (`Ilm-i hay`at) P - Aligarh (Azad. `Abd al-Ḥayy 122/9), Dushanbe (242, 471/3, 674), Hyderabad (I 55), Lahore (Univ.), Manchester (365), Mashhad (16, 113), Oxford (I 731/10; 1541), Patna (1048), Rampur (I 45), Tbilisi (59/95), Tehran (136, 190).

A2. Twenty Chapters on Ephemerides (Bīst bāb dar taqwīm) = Concise [Book] (Treatise) on the Knowledge of Ephemerides (Mukhtaṣar (Risāla) dar ma`rifat-i taqwīm) P - Calcutta (1490, J 13), Cambridge (Browne Sup. 1490/1), Hyderabad (riyāḍa. 175, 183; Osm. 474; Salar hay'a 31-31a, 36), London (11333/1; Ind. 2246), Mashhad (18, 20, 5235, 5245, 5247; Gawharshad 188/3, 1088/5, Univ. 28), Munich (346/5), Oxford (1312, 1539-1540), Tehran (3149; Univ. 1923/1, 2307/1, 4768/5, Huquq 302/1).

A3. Science on Astronomy and Calendar (`Ilm-i nujūm u taqwīm) P - Tbilisi (34/68).

A4. Treatise on Instruments of Observation (Risāla fī ālāt al-raṣad) - Hyderabad (riyāḍa. 154), Rampur (I 424). Research: Abdulla-zade [15].

A5. Rises of Light on Determining the Quantity [of Time] between the Rise of Dawn and Rise of the Sun (Mashāriq al-aḍwā' fī ma`rifat kammiyya mā bayna ṭulū` al-fajr wa ṭulū` al-shams) - Tehran (642/5).

A6. Concise [Book] on Explanation of Observation (Mukhtaṣar fī bayān al-rasad) - Hyderabad (riyāḍa. 127, 154).

A7. Commentary on "Exposition of Almagest" (Sharḥ Taḥrīr al-Majisṭī) - Aligarh (Azad `Abd al-Ḥayy 642/19, Habib 44/18), Calcutta (88, Buhar 345), Cambridge (1270), Hyderabad (riyāḍa. 448), Istanbul (SM Selim 735), London (Ind. 742), Manchester (368; Lind. 299), Najaf (al-Samawi), Oxford (Eton 62), Rampur (I 5), Tehran (Milli 1634; Senat 7565). Commentary on the work (No 606, A1) of al-Ṭūsī.

A8. Commentary on Zīj of Ulugh Beg (Sharḥ-i Zīj-i Ulugh Beg) = Commentary on the "New Sultan Zīj" (Sharḥ Zīj-i jadīd-i Sulṭānī) P -Aligarh (Azad `Abd al-Ḥayy 127/17; Habib 44/19), Calcutta (Curz. 1487-1488), Cambridge (Browne Sup. 741 (King 233)), Hyderabad (riyāḍa. 400, 419; Salar hay'a 24-26), Istanbul (NO 2939; Topkapı Emanet Hazinesi 1714, III. Ahmed 3489; SM Hamidiye 84; Kandilli 253.), Jaipur (5), Kashan (Milli 304), London (Sup. 156, 16745; Ind. 2237-2239, 3000, Ross 18), Madras (Firuz 48, 54, 92), Mahachqala (181), Mashhad (Mawlawi 289/1; Nawwab 7; Fāḍil. 39), Najaf (Shushtari), Oxford (1520, 2232), Patna (1042-1044), Kazan (24), Rampur (1210), St. Petersburg (Nat. Khan. 119), Tashkent (458, 704, 942), Tehran (189, 2146, 2460/1, 4716; Mahdawi 281/4; Senat 2240; Sipahsalar 685, 8247; Univ. 473-474, 915, Adab. 6, Ilah. 184, 274), Yazd (Waziri 321), Rehatsek 12 p. 45, Astan-ı Quds Razavi 12035, Rieu II 4576, Ross-Browne 18, Ethé 3000, 2237, 2238. In addition to those stated above, 15 manuscript copies are mentioned in OALT. Arabic translation by Damadan al-Muhi (No 1281) of introduction: Mahachqala (181). Descriptions of the Tashkent manuscripts: SVR [1] (I 229). Descriptions of the Tashkent manuscript 704: Qary-Niyazov [1] (102-185). Research: A. Ahmedov [11]. Commentary on zīj (No 816, A1) of Ulugh Beg.

A9. Commentary on "Memoir" of Naṣīr al-Dīn (Sharḥ al-Tadhkira al-Naṣīriyya) - Aligarh (Azad `Abd al-Ḥayy 654/31, Sul. 159/19), Baghdad (2972), Hyderabad (riyāḍa. 55, 418; Osm. 242; Salar hay'a 12-13), Manchester (Lind. 457/2), Mashhad (5340; Gawharshad 425), St. Petersburg (C 1286; Nat. Khan. 121), Tehran (190) - is mentioned in KZ (II 269). Commentary on the work (No 606, A10) of al-Ṭūsī.

A10. Commentary on "Twenty Chapters on the Knowledge of Astrolabe" (Sharḥ-i Bīst bāb dar ma` rifat-i usṭurlāb) P - Aligarh (Azad Habib 44/7, Subh. 3430, Sul. 537/16), Diyarbakır (492/1), Baghdad (Sup. 322), Baku (B 170, 2141, 2553), Berlin (339), Cairo (lughat 4435, mīqāt 1188/3, Ṭal`at majlis 398/1, mīqāt fārisī 2/2), Calcutta (1488, Curz. 569; Buhar 226), Dushanbe (362, 471/1), Hyderabad (jadid 269 - anonymous, riyāḍa. 74, 84, 149/2, 201, 213; Nizam. 537; Said hay'a 8-9; Salar hay'a 18-20), Istanbul (AS 2424, 2648, 2448, 2697, 2819/3, SM Bağdadlı Vehbi 992, Beşir 428/2, Şehid Ali 1820/2, Hüseyin Çelebi 753, Yazma Bağışlar 1352; Kandilli 120/1; Veliyuddin 2271), Isfahan (632), Kastamonu (1496), London (453/2, 8374, Sup. 155/2, 22752; Ind. 2237-2238, 3000, Ross 18), Manchester (Lind. 713), Mashhad (115, 5342-5344, 5565-5566, 6508; Gawharshad 932/3; Mawlawi 37/5, 553/2; Univ. 314-317), Najaf (Ayatallah 163), Oxford 1520), Paris (783/2, 791), Patna (1045-1047, 1648), Kazan (20), Rampur (1183-1185, 1183b), Rasht (III 105), St. Petersburg (A 260, B 2218; Nat. 315/2, 316, PNS 144/2), Tashkent (1854), Tehran (188-189, 641/7, 2440/2, 2442/2, 2463, 4830, 4884, 6601/2; Zanjani; Ma`apif 333, 1368/2, Milli 470/2, 773, 935; Sipahsalar 700-701, 7391/2, 8276; Univ. 829, 2008/2, 2300, 2480, 2651/2, 3956, Adab. 238, Ilah. 269, 332, 547/5), Astan-i Quds Razavi 12023, Raşid Efendi Mülhak 11300/2, Hoca Mustafa 505/9. In addition to those stated above, 15 manuscript copies are mentioned in OALT. Arabic translation: Rampur (3010). Research: Babayev [1], Mamedova [1]. Commentary on the work (No 606, A14) of al-Ṭūsī.

A11. Super-commentary on Commentary on "Compendium" (Ḥāshiya `alā sharḥ al-Mulakhkhaṣ) - Aligarh (Azad `Abd al-Ḥayy 641/18, Habib 44/1, 8, 8a, 17, Sul. 171/31, 183/43), Baghdad (2961, Al-Matḥaf al-`Irāqī 772, 27757), Baku (A 850/2, B 224, 456), Berlin (5677), Cairo (falak 4595, hay'a 1, 3, 19-20, 39, Fāḍil hay'a 1, 2/1, 4/3, Kavala hay'a 2/2, 3/1, 4, Ṭal`at majlis 162/1, majlis fārisī 26/1, Taymūr riyāḍa. 153, Zaki 480), Calcutta (Buhar 350), Damascus (6868), Diyarbakır (222), Hyderabad (jadid 3084; Osm. 242; Said hay'a 2; Salar hay'a 7-8), Istanbul (NO 2907-2909; SM Laleli 2118-2119; Fatih 492, Yazma Bağışlar 739, 152/2, Carullah 1462, Yusuf Ağa 308/3, Bağdadlı Vehbi 847), Kabul (Archives 409), London (Sup. 762; Ind. 754), Manchester (Lind. 322/2), Mahachqala (966), Mashhad (17/47), Mosul (179/120), New Haven (1471), Paris (5074, 6345), Patna (2046/7, 2442-2443), Peshawar (1768), Princeton (988/9; Yehuda 1016, 1114, 1131, 2975, 4726, 4772), Kazan (1440), Rampur (hay'a 27), St. Petersburg (B 2002, 1302/3, C 1970/4; Nat. 126/2; Univ. 191), Tashkent (2655/3-4, 3935/2, 5669/2), Tehran (Univ. 823, 947), Abbas Azavi (9671, 10479),

Murad Molla (1641/2). In addition to those stated above 84 manuscript copies are mentioned in OALT. Super-commentary on commentary (No 808, A1) by al-Rūmī on the work (No 547, A1) of al-Jaghmīnī.

A12. Comments on Commentary on "Compendium" (Ta`liqāt dar sharḥ-i Mulakhkhaṣ) P - Tabriz (217).

A13. Commentary on Khaqan Zīj (Sharḥ-i Zīj-i Khāqanī) P - Tehran (Mahdawi 281/4). Commentary on the work (No 802, A1) of al-Kāshī.

A14. Risāla dar Ab`ād-i Ajrām wa `Ajā'ib-i Bilād. - Mashad (III fscl. 17 Mss. 7, fscl. 17, Ethé 7), Browne (II K. 6 (3)), Rieu (II 8726, I. 417a, 418a), India Office (3776), Meclisi Senayi Milli (621), Bodleian (404). Commentary on the work (No 802, A4) of al-Kāshī.

A15. Risāla dar Ma`rifat-i Taqwīm. - Astan-i Quds Razavi (12208/1, 12176/1), Aumer (346/5), Bodleian (1359, 1540), Browne (suppl. 1490/1), Ethé (2246), Istanbul (BU Veliyuddin 2283/2), Ivanow (1490), Mashad (III fscl 17 Mss. 18, 20), München (P. 346. 60), Oxford (73/12), .

A16. Tuḥfa-i Salimiya. - İ. Ü. FY. 71.

AG1. Distances and Volumes (Ab`ād u ajrām) = Treatise on Distances and Volumes and Marvels of Countries (Risāla dar ab`ād u ajrām u `ajā'ib-i bilād) P - Cambridge (Browne King 6/3), Dushanbe (576), London (417/1, 418/1, 827/2; Ind. 717), Mashhad (7, 79), Oxford (404), Tehran (621/11).

AG2. Marvels of Countries (`Ajā'ib al-buldān) P - Dushanbe (674), St. Petersburg (A 254/1), Tashkent (11359/1). Description of the St. Petersburg manuscript: Miklukho-Maclay [3] (57-60). Description of the Tashkent manuscript: SVR (VIII 69-70).

G1. Treatise on the Method of Measuring the Latitude of Climate and Mentioning Cities (Risāla dar ṭarīq-i masāḥat-i `arḍ u iqlīm u dhikr-i bilād) P - Mashhad (5532).

939. `IMAD AL-BUKHARI

`Imād (al-Dīn) ibn Jamāl [al-Dīn] al-Bukhārī (16th c.), from Bukhara, astronomer.

See: MAMS (III 20), PL (II 70, 75), SSM (159), STMI (315-316).

A1. Simplification of Zīj (of `Imad) (Tashīl al-zīj, Tashīlāt zīj al-`Imādī) P - Cairo (mīqāt fārisī 10), Calcutta (Curz. 389, 573), Madras (Firuz 17), Oxford (1521), Rampur (1213), St. Petersburg (C 1575). Treatise is dedicated to Sultan Abū Sa`īd Guragan ibn Muḥammad ibn Miran-Shah ibn Tīmūr, sultan of Bukhara in 1451-1459 and ruler of the Tīmurid Empire in 1459-1469.

A2. Equalized Equation of the Moon (Ta`dīl-i mu`addal-i qamar) P - Tehran (Sipah-salar 686/3; Univ. 2610).

940. MIRIM CHELEBI (MİRİM ÇELEBİ)

Maḥmūd ibn Muḥammad ibn Qāḍī-zāda al-Rūmī "Mirim Çelebi" (d. 1525), grandson of al-Rūmī (No 808) (from his son) and of al-Qushjī (No 845) (from his daughter), born in Samarkand; worked in Gelibolu, Edirne, and Bursa (all in Turkey), astronomer and theologian, died in Edirne.

See: GAL (II 593), GAL² (II 665), HOL, KZ (III 93, 365, 401-402, 407, 411, 426, 560, IV 379, V 34, 110, VI 226), MA (158-162), MAA (188), MAA² (180), MAMS (II 543-545), OALT (90-101), OM (III 298-299), PL (II 79-80), SSM (169-170), TIFI (147-149); Abdullayev and Ḥikmatullayev [1] (74-75), Matviyevskaya and Sokolovskaya [1] (45-46), Voronovskiy [2] (129).

A1. Rules of Actions and Corrections of the Table (Dastūr al-`amal wa taṣḥīḥ al-jadwal) = Commentary on the Zīj of 'Ulugh Beg (Sharḥ-i Zīj-i Ulugh Beg) P - Baku (B 2141/2), Beirut (204), ` Berlin (339), Cairo (lughat 4346, Fāḍil mīqāt fārisī 1, Taymūr riyāḍa. 150), Istanbul (AS 2697; BU Veliyuddin 2275-2276; SM Aşir 188, Çorlulu 342, Hamid. 848-849, Feyzullah 1343, Hasan Hüsnü 1284; Arkeoloji Müzesi 545; Univ. FY. 323, 1301, 1387, Topkapı Revan Köşkü 1717; Ragıp Paşa 927; Kandilli 99), Paris (163, 791), is quoted in KZ (III 560). In addition to those stated above, 13 manuscript copies are mentioned in OALT. Treatise was written in 1498 and dedicated to Sultan Bayezid II. French translation of the exposition of treatise (No 802, M4) of al-Kāshī: L. Sédillot [9] (333-350).

A2. Commentary on the "Treatise of Conquest" (Sharḥ al-risāla al-fatḥiya) - Afyon (17208), Baghdad (2971), Berlin (311), Bursa (Haraççıoğlu 1160), Cairo (hay'a 70, falak 4042, Zaki 477), Istanbul (AS 2639/40; SM Laleli 2138, Hüseyin Çelebi 755/1, Feyzullah 1347; Topkapı III. Ahmed 3480; Köprülü 1602/52; BU 4614, 4616), London (1560, Sup. 2096/2, 2340/2, 2389/1), Madina (Arif Hikmet 2926) Paris (8504/5), Princeton (990), St. Petersburg (B 1780/1), Vienna (346). In addition to those stated above 8 manuscript copies are mentioned in OALT. Commentary on the treatise (No 845, A2) of al-Qushjī.

A3. Treatise on Research of the Azimuth of Qibla (Risāla fī taḥqīq samt al-Qibla) -Istanbul (SM AS 2628. 2629. SM Hüseyin Çelebi 755/2, Hamidiye 866/4, Feyzullah 2179/1; Mehmet Nuri Bey 163/1). Description of the manuscript: Ruska and Hartner [1] (205)

A4. General Treatise on the Sine [Quadrant] (Risāla al-jayb al-jāmi`a) = Treatise on General Sine [Quadrant] (Risāla al-jayb al-jāmi`) - Berlin (5855), Çorum (3004/3), Istanbul (SM Hacı Beşir Ağa 665/2, Carullah 2132/2, Hafid Efendi 455/3, Esad Efendi 3731/3, 3547/7, Kılıç Ali 1030/6, 682/9; NO 2918/1; Kandilli 156). Manisa (6591/5), Princeton (Garr. 2006/20, Yehuda 317 - is ascribed to al-Akhwin, No 893). Description of the Berlin manuscript: Ahlwardt [1] (262). Treatise in 16 chapters, written in 1494, dedicated to Sultan Bayezid II.

A5. General Treatise on Knowledge of Actions with the Quadrant (Risāla dar ma`rifat-i `amal bā rub`-i jāmi`a) = General Treatise on the Quadrant (Risāla-yi rub`i jāmi`a) P -Berlin (5872/12), Bursa (Haraççıoğlu 1178/4), Istanbul (NO 2926/2; Topkapı Hazine 1760/1; SM Aşir Efendi 470/7, Reisülküttab 578/2), St. Petersburg (B 836/2).

A6. Treatise (Doctrine) on the Sine Quadrant (Risāla (Muhadhdhab) dar `amal-i rub`-i mujayyab) P - Bombay (Firuz 32), Cairo (Fāḍil majlis 180/8), Istanbul (SM Reisülküttab 578/1, Hüseyin Çelebi 748/4; Topkapı Hazine 1760/1; NO 2926/3,) St. Petersburg (B 836/4).

A7. Treatise on the Almucantar Quadrant (Risāla dar rub` al-miqanṭarāt) P - Cairo (Fāḍil majlis 180/6), Istanbul (BU 4635/1), Paris (792), St. Petersburg (A 686), Dar al-Masnawi No . 345/2, Astan-i Quds Razavi No 12042.

A8. Treatise on Knowledge of Actions with the Quadrant [of the Astrolabe] Shakāziyya (Risāla dar ma`rifat-i `amal bā-rub`-i shikkāzī) P - Istanbul (NO 2926/4), St. Petersburg (B 836/3).

A9. Concise [Book] on the Knowledge of Actions with Quadrant [of the Astrolabe] Shakāziyya (Mukhtaṣar dar ma`rifat-i `amal bā rub`-i shikāzī) P - St. Petersburg (B 836/1).

A10. Treatise (Risāla) P - St. Petersburg (B 836/5).

A11. Commentary on al-Ṭūsī's "Zīj-i īlkhānī" (Sharḥ-i zīj-i īlkhānī li'l-Ṭūsī) P - Istanbul (SM AS 2968). Commentary on the work (No 606, A8) of al-Ṭūsī.

A12. Treatise on Qibla and Determination of its Azimuth (Risāla fi'l Qibla wa ma`rifat samtihā) - is mentioned in OM.

A13. Treatise on the [Astrolabe] Zarqala (Risāla al-zarqāla) -Istanbul (Millet, Ali Emiri Arabi 2969/2; NO 2926/5; Kandilli 120/3), Astan-i Quds Razavi 12209. is mentioned in OM.

A14. Risāla fi Ḥall 'Uqadi Bad' al-Mawāḍi` al-Muḍ'ıla min Ta`dīl al-'Ulūm- Istanbul (SM Turhan Valide 110/1)

A15. Ghāyat al-Ma`mūl wa Nihāyat al-Mas'ūl - Istanbul (Selim Ağa 732/4)

M1. Mathematical Part of A1. French translation: L. Sédillot [9] (333-350). Russian translation by Rosenfeld: al-Kāshī [6] (311-319. Trigonometrical Part of A1 containing exposition of determining sine 1^{o} according to the works of al-Rūmī (No 808, M4) and al-Qushjī (No 845, A3).

941. ZAYN AL-DIN `URFA AL-DIMASHQI

Zayn al-Dīn `Urfa ibn Muḥammad al-Dimashqī (d. 1525), from Damascus, mathematician.

See: MAA (188), MAMS (II 545), OMLT (53-54).

M1. Commentary on the poem "Victory [of Granting] on the Science of Arithmetic" of al-Zamzamī (Sharḥ manẓūmat Fatḥ [al-wahhāb] fī `ilm al-ḥisāb li'l-Zamzamī) - Cairo (riyāḍa. 56, 1099). Commentary on the poem (No 878, M1) of al-Zamzamī.

942. AHMAD AL-QASTALANI AL-MISRI

Shihāb al-Dīn Abū'l-`Abbās Aḥmad ibn Muḥammad ibn Abī Bakr al-Khāṭib al-Qasṭalānī al-Miṣrī (1448-1517) from Egypt; Ottoman theologian and astronomer.

See: GAL (II 87-88), GAL² (II 78-79), KZ (III 402), MAA (188), MAMS (II 545); Brockelmann [14] (EI, EI²).

A1. Treatise on the Sine Quadrant (Risāla fi'l-rub` al-mujayyab) - is mentioned in KZ.

943. ELIYA MIZRAHI

Eliya Mizraḥī (ca 1450-1526), was born and lived in Istanbul under sultans Mehmed II (1451-1481), Bayezid II (1481-1512), Yavuz Selim (1512-1520), and Süleyman I (the Magnificent) (1520-1566). Jewish scholar, descendant of Byzantine Jews (Romaniot); the highest rabbinical authority of his time and chief rabbi in the Ottoman Empire from 1498 onwards; also mathematician, astronomer, physicist, and philosopher.

See: Cantor [3] (II 213, 414-415), Hackel [1] (EJ), Seligsohn [3] (JE), Steinschneider [11a] (322, 508, 524), Wertheim [1], Wiedemann [117].

M1. Book of Number (Sefer ha-mispar). Edition: Mizrahi [1]. Mizrahi knew decimal fractions from the Istanbul mathematicians and was a link between them and the mathematicians of Western Europe (see Rashed [44], 415). Research of the chapter on specific weights: Wiedemann [177].

M2. [Commentary on Euclid's "Elements"] - is mentioned by Jos. H.

A1. [Commentary on Ptolemy's "Almagest"] - is mentioned by Jos. H.

PH1. [Commentary on "Refutation of Philosophers"] - is mentioned by Jos. H. Commentary on the work (No 415, PH1) of al-Ghazzālī.

944. ZAHIR AL-DIN BABUR

Ẓahīr al-Dīn Muḥammad Bābur ibn ʿUmar-shaikh-mīrzā ibn Sulṭān Abū Saʿīd-mīrzā ibn Sulṭān-Muḥammad-mīrzā ibn Mīrānshāh ibn Tīmūr Guragān (1483-1530) (bābur = tiger), descendant of Tīmūr, son of the governor of Farghana. He was driven out of Central Asia by the Uzbegs of Shaybani ab. 1504; he conquered Kabul and campaigned in India. In 1526, he founded the Great Mogul Empire in Northern India and ruled as emperor between 1526-1530.

See: MAMS (II 545-546), PL (I 529-536), PL^2 (828-838); Azimjanova [4-6], Browne [4] (453-458), Edwards [1], Erskine [1], Grenard [1], Harrison, Hardy and Köprülü [1] (EI^2), Hasanov [2, 9], Homil [1], Huart [2] (EI), Köprülü [2] (IA), Lane-Poole [1] (322-328), [2], Lamb [1], Lehmann [1], Sayılı [18] (264, 275-276), Teufel [1], V. Zahidov [5], [7] (187-223),

MA1. Gift to Amir (Tuḥfat al-amīr) P - Tehran (Univ. 3338). Treatise contains introduction and 3 books: 1) astronomy, 2) geometry and geography, 3) arithmetic. It was written for his son Humayun (No 971).

H1. Babūr-name (Bābur-nāma) = Events of Babūr (Wāqiʿāt-i Bāburī) T - Babūr's memoirs. Editions by Ilminsky, Beveridge, Shamsiyev and Mirzayev: Babūr [2, 4, 11]. English translation by Leiden and Erskine: Babūr [1, 7]. French translation by Pavet de Courteille: Babūr [3]. Turkish translation by Arat: Babūr [8]. Russian translation by Sal'ye: Babūr [10, 13], Uzbeki translation: Babūr [15]. Research: Azimjanova [7].

L1. Treatise on ʿAruz (ʿArūḍ risālasī) T. Edition by Stebleva: Babūr [16]. Research: Stebleva [1]. Revision of treatise (No 606, L1) of al-Ṭūsī.

L2. Divan (Dīwān) T, P. Editions by Denison Ross, Samoilovich, Azimjanova, and Kayumov: Babūr [5- 6, 14]. Russian translation by Pen'kovskiy and others: Babūr [9, 14). Research: Azimjanova [3], Ye. Bertel's [4].

945. SHAMS AL-DIN AL-WAFAI AL-SUYUTI

Shams al-Dīn Muḥammad ibn Dallāl al-Wafāī al-Suyūṭī (d. 1533), born in Suyut (Asyut, Egypt), worked in Cairo; astronomer, pupil of al-Sufi al-Misri (No 888).

See: GAL^2 (II 485), MAA (188-189), MAMS (II 546), OALT (114-115, 226).

A1. Delight of Eyes on Operations [of Timekeeping] in Day and Night (Nuzhat al-abṣār fī aʿmāl al-layl wa'l-nahār) - Cairo (mīqāt 188/1).

A2. Brilliant Jewels on Drawing (al-Jawāhir al-nayyirāt fī rasm al-basāʾiṭ wa'l-munḥarifāt). Abridgement by al-Malaqi (No 946, A1).

A3. al-Jawhara al-Muḍʿiyya fi'l-Aʿmal bi'l-Nisba al-Sittiniya - Erzincan (112/1)

A4. Risāla al-āfāqiya fi'l-ʿAmal bi'l-Nisba al-Sittiniya - Erzincan (112/2)

946. ʿALI AL-MALAQI

ʿAlī al-Mālaqī al-Andalusī (16th c.), born in Malaga, Spain, pupil of al-Umawī al-Andalusī (No 931); astronomer.

See: GAL^2 (II 485), MAA (189), MAMS (II 546-547), OALT (226-227).

A1. Construction of Horizontal and Oblique [Sundials] (al-Waḍ` `alā jihāt al-basā'iṭ wa'l-munḥarifāt) -Baghdad (Al-Matḥaf al-`Irāqī 27329/11, 4568/5), Berlin (5715), Cairo (falak 3987, majlis 323/5, mīqāt 126/4 - a fragment, 166/2, 452/1, 703-704, 205, Fāḍil mīqāt 244/1), Gotha (1381/5), Istanbul (NO 2929; Kandilli 248/2; SM Yazma Bağışlar 2062/15, Yusuf Ağa 9887/3), Princeton (Yehuda 3442), Rampur (I 430/78). Description of the Berlin manuscript: Ahlwardt [1] (183-184). Abridgement of the work (No 931, A2), al-Andalusī.

947. ABU SALIM AL-SAMLALI (AL-SİMLALI)

Abū`Sālim Ibrāhīm ibn Abī'l-Qasim al-Samlālī (16th c.), Ottoman poet, mathematician; pupil of Aḥmad ibn Sulaymān ibn Kamāl Pashā (d. 1533).
See: MAMS (II 547), OMLT (96-97).
M1. Poem on Arithmetic (al-Manẓūma fi'l-ḥisāb) - Calcutta (1462). The complete list is given in OMLT.
M2. Wings of Wish in the Knowledge of Inheritance and Arithmetic (Ajniḥat al-gurāb fī ma`rifat al-farā'iḍ wa'l-ḥisāb) - Rabat (2439, 2440).

948. MUSA GALINUS AL-ISRAILI AL-YATRAWI

Mūsā Gālīnūs (Jālīnūs) al-Isrā'ilī al-Yatrawī (Moshe Galina (Galiano) ben Yehuda) (15-16tn c.), Ottoman physician and astronomer.
See: MAMS (II 547), OALT (224-225), SSM (169); Seligsohn [1].
A1. [Astronomical Treatise] - Istanbul (TK 3302/2). Description of the manuscript: SHIM (520). Critique of epicyclic and excentric hypotheses of the movement of planets.
A2. Book of Zīj Translated into Arabic from French (Kitāb al-zīj al-mutarjam bi'l-`arabiyya min al-faranjiyya) - Berlin (9734/13), Escorial (II 966). Description of the Escorial manuscript: Derenbourg [7] (110-111). Book was written in 1506.

949. MUHAMMAD IBN RIDWAN

Muḥammad ibn Riḍwān (d. 1533), astronomer.
See: KZ (III 366), MAMS (II 548).
A1. Treatise on the Astrolabe and its Construction (Risālat al-asṭurlāb wa`amalihī) - is mentioned in KZ.

950. ABU ISHAQ `ABDALLAH (ABU İSHAK)

Abū Isḥaq `Abdallāh (15-16th c.), Turkish mathematician, pupil of al-Qushjī (No 845).
See: MAMS (II 548), OMLT (31-33).
M1. Commentary on "Sunny [Treatise] on Arithmetic" (Sharḥ al-Shamsiyya fi'l-ḥisāb) - Patna (2018). Description of the manuscript: Sayyid [1] (56). The complete list is given in OMLT. Commentary on the work (No 686, M1) of al-Naysabūri.

951. RUKN AL-DIN AL-`AMULI

Rukn (al-Dīn) ibn Sharaf al-Dīn al-Ḥusaynī al-`āmulī (15-16th c), astronomer, worked at the courts of Abū Said (1459-1469) the Tīmūrid Sultan of Transoxania and Mogul Emperor Babūr (No 944).
See: MAMS (III 37-38), PL (II 73-74), STMI (355).
A1. Fifty Chapters for the Sultan (Panjāh bāb-i sulṭānī) = Fifty Chapters on Construction of Astrolabe (Panjāh bāb dar shinakhtan-i asṭurlāb) P - Baku (A 850/4), Cairo (lughat 4792), Istanbul (SM AS 2667, Laleli 289), London (Sup. 2044, Ellis M 318; Ind. Ross 14/8), Mashhad (21), Patna (Sup. 2044), Tehran (642/8; Univ. 842), Uppsala (329). Treatise contains expositions of treatises (No 67, A1) of al-Farghānī; (No 348, A5) of al-Bīrūnı; and (No 606, A14) of al-Ṭūsī, and is dedicated to Sultan Abū Said. It was written in 1455.
A2. Treatise on the Construction of Astrolabe (Risāla-yi `amal-i asṭurlāb) P - Konya (734).
A3. General Zīj of [Abū] Said (Zīj jāmi` Sa`īdī) - Tehran (183). Revision of the zīj (No 606, A8) of al-Ṭūsī, written in 1456 and dedicated to Abū Said.

952. MURTADA AL-SHARIFI

Murtaḍā ibn Sharīf al-Sharīfī (16th c.) mathematician.

See: MAMS (II 548).

M1. Ascensions of Lights (Maṭla' al-anwār) - Princeton (Yehuda (1858/1). Geometric treatise, written in 1536.

953. KAMAL PASHA ZADA

Aḥmad ibn Sulayman "Kamāl Pāshā-zāda" (16th c.), philosopher.

See: GAL (II 597-602), GAL² (II 668-673, III 1306), SSM (170).

M1. [Treatise Explaining the Method Used by him to Express the Date of some of his Compilations] - Cairo (Ṭal'at majlis 635/11 - anonymous). The method is based on the use of arithmetic fractions.

954. NAJM AL-DIN AL-MISRI

Najm al-Dīn Abū'l-Fatḥ Muḥammad ibn Muḥammad al-Miṣrī (16th c.), from Egypt, mathematician and astronomer.

See: MAA (189), MAMS (II 548), OALT (116-126).

M1. Highest Order of Operations with the Sexagesimal Ratio Tables (Nihāyat al-rutba fi'l-'amal bi jadwal al-nisba al-sittīniyya) - Oxford (I 1043/3). Abridgement of the work (No 873, M1) of Sibṭ al-Maridīnī, probably coinciding with al-Maridīnī's abridgement of M3 with the similar title.

A1. [Astronomical and Chronological Tables] - Oxford (944, 995).

A2. Arithmetic Treatise on Operations with Horizons (al-Risāla al-ḥisābiyya fi'l-a'māl al-āfāqiyya) - Milan (277a).

955. SHIHAB AL-DIN AL-MALIKI

Shihāb al-Dīn Abū'l-'Abbās Aḥmad ibn Mūsā ibn 'Abd al-Ghaffār al-Malikī, Ottoman mathematician and astronomer.

See: GAL (II 154), GAL² (155, 536), MAA (189), MAMS (II 548-549, III 12), OALT (74), OMLT (56-58), SSM (85), STMI (278).

M1. Threading Strewed Pearls in Consecutive Operations with Integers and Fractions (Naẓm al-durr al-manthūr fī 'amal al-munāsakhat bi'l-ṣaḥīḥ wa'l-kusūr) - Princeton (1040), Rampur (I 30). Description of the Princeton manuscript: Hitti, Faris, and 'Abd al-Malik [1] (326-327).

M2. Commentary on "Light on the Science of Arithmetic" (Sharḥ al-Luma' fī 'ilm al-ḥisāb) - Berlin (5939), Paris (2472), Istanbul (SM Fatih 3447, 2472), Princeton (1088). Description of the Princeton manuscript: Hitti, Faris, and 'Abd al-Malik [1] (326). Commentary on the treatise (No 783, M4) of Ibn al-Hā'im.

M3. Means for "Means in Arithmetic (Wasīlat al-Wasīla fi'l-ḥisāb) - Najaf (Ayatallah 139). Commentary on the treatise (No 783, M8) of Ibn al-Hā'im.

A1. Thread of Two Pearls on Solution of [Problems of] the Sun and the Moon (Silk al-durrayn fī ḥall al-nayyirayn) - Cairo (mīqāt 131/1, Fāḍil mīqāt 134-135, 203/2, Taymūr riyāḍa. 317/3), Istanbul (SM Çorlulu Ali Paşa 338/1, Carullah 1483/1), Kazan (1760). Commentary on the work (No 815, M19) of Ibn al-Majdī.

A2. Jewels of the Thread (Jawāhir al-Silk) - Cairo (mīqāt 509, Fāḍil mīqāt 134, Taymūr riyāḍa. 317/1). Abridgement of A1.

A3. Concise Treatise on Perfect and Truncated Quadrants on which there are Almucantars (Risāla-yi mukhtaṣara 'alā rub'ay al-kāmil wa'l-maqṭū'al-mawḍū 'a 'alayhimā al-muqanṭarāt) - Hyderabad (Salar hay'a 30/5).

A4. Jawāhir al-Silk (OALT, p. 74).

A5. Silk al-Durrayn fī Hall al-Nayyirayn (OALT, p. 74).

956. SULAYMAN AL-MAHRI

Sulaymān ibn 'Alī ibn Sulaymān al-Mahrī (16th c.), navigator and astronomer.

See: AGL (565-569), GAL² (II 231), MAMS (II 549), SSM (187); Ferrand [5] (EI), [7] (IA).

AG1. Book of Glorious Way for the Knowledge of the Stormy Sea (Kitāb al-minhāj al-fākhir fī 'ilm al-baḥr al-zākhir) - Cairo (Taymūr riyāḍa. 308), Rampur (I 430/77). Edition: Khuri [2], al-Mahri [1], edition with French translation: Ferrand [2].

AG2. Support of al-Mahri for Substantiation of Marine Sciences (al-`Umda al-Mahriyya fī ḍabṭ al-`ulūm al-baḥriyya) - Cairo (Taymūr riyāḍa. 309), Paris (2559). Research: AGL (565-568).

AG3. Mirror of Navigation by [Stars of] Celestial Sphere (Mir'āt al-aslāk li kurat al-aflāk) - New Haven (1480).

AG4. Necklace of Suns for Determining the Fundamental Rules (Qalā'id al-shumūs fī istikhrāj qawā`id al-asus) – Kabul (Matb. 76/34).

957. MAHMUD AL-FARISI

Maḥmūd ibn Aḥmad al-Fārisī (16th c.), from Fars, astronomer, worked in Samarkand.

See: MAMS (II 551).

A1. Treatise on Equation of the Moon (Risāla dar mu`addal-i qamar) P - Calcutta (Curs.). Treatise was written in 1517.

958. ZAYN AL-`ABIDIN AL-DURRI

Sarī al-Dīn Zayn al-`ābidīn ibn Aḥmad ibn Muḥibb al-Dīn al-Durrī al-Malikī (16th c.), mathematician.

See: GAL[2] (II 154), MAMS (II 551), SSM (100).

M1. Concise Commentary on Introduction to [the Treatise] titled "Light on the Science of Arithmetic" (Sharḥ mukhtaṣar `alā'l-muqaddima al-musammāt bi'l-Lum`a fī `ilm al-ḥisāb) = Commentary on "Light" of Ibn al-Hā'im (Sharḥ al-Lum`a li-Ibn al-Hā'im) - Berlin (5990), Cairo (falak 4305, 17290, riyāḍa. 181/2, Ḥalīm riyāḍa. 10, Taymūr riyāḍa. 292). Description of the Berlin manuscript: Ahlwardt [1] (341-342). Commentary on the work (No 783, M6) of Ibn al-Hā'im.

959. IBRAHIM AL-HALABI

Burhān al-Dīn Ibrāhīm ibn Muḥammad ibn Ibrāhīm al-Ḥalabī (d. 1549), from Aleppo, theologian and matematician.

See: GAL (II 157, 570-571), GAL[2] (II 642-643), MAMS (II 551), SSM (86).

M1. Commentary on "Comprehensive Arithmetic" of Ibn al-Hā'im (Sharḥ al-Ḥāwī fī'l-ḥisāb li-Ibn al-Hā'im) - Cairo (riyāḍa. 667). Commentary on the work (No 783, M22) of Ibn al-Hā'im.

M2. Comments on "Subtleties of Truths" (Ḥawāshī `alā Raqā'iq al-ḥaqā'iq) - Cairo (mīqāt 877). Commentary on the work (No 873, M1) of Sibṭ al-Māridīnī.

A1. Treatise on Controversible Question at the Beginning of Commentary by Qazi-Zada on "Compendium" of al-Jaghmīnī (Risāla fī mas`alat al-jadal fī awā'il sharḥ Qāḍi-zāda `alā Mulakhkhas al-Jaghmīnī) - Cairo (Fāḍil hay'a 4/2), Istanbul (SM Laleli 2126/3). Treatise on the problem of the height of mountains as discussed in the commentary (No 808, A1) by al-Rūmī on the work (No 547, A1) of al-Jaghmīnī.

Me1. [Treatise on Weights and Measures] - Princeton (Yehuda 1062).

960. `AFIF AL-DIN BA MAKHRAMA

`Afīf al-Dīn `Abdallāh ibn Muḥammad ibn Ibrāhīm ibn `Aṭiya ibn Muḥammad (ibn `Umar ibn `Abdallāh) ibn Aḥmad ibn Muḥyi al-Dīn al-Ḥārithī al-Najrānī al-Madānī al-Madhḥījī "Bā Makhrama" (1501-1564), Yemeni mathematician and astronomer.

See: GAL[2] (II 253), MAMS (III 7), MAY (40-41, 57-59), OALT (151), SSM (133).

M1. Fragrant Gardens on the Science on Measuring (al-Riyaḍ al-naffāḥa fī `ilm al-misāḥa) - Milan (B 16/1).

A1. Comprehensive Book on Indications of Qibla, Greek Reckoning, and [Lunar] Stations (al-Kitāb al-shāmil fī dalā'il al-Qibla wa'l-hisāb al-Rūmī wa'l-manāzil) - Cairo (mīqāt 899/1 - a fragment, 948/2).

A2. Light on the Science of Astronomy (Lum`a fī `ilm al-falak) - Rabat (Kattani 3023).

A3. Table for the Knowledge of Coincidence and Difference of Ascensions for [Determining] the Visibility of the Crescent (Jadwal fī ma`rifat al-maṭāli` wa ikhtilāfihā fī ru'yat al-ahilla) - Cairo (majlis 713/15).

A4. Uses on the Knowledge of Shadows for the Latitudes of Aden and Taiz (Fawā'id fī ma`rifat al-aẓlāl li-`arḍ `Adan wa li-`arḍ Ta`izz) - Cairo (mīqāt 948).

961. MAHFUZ AL-HADRAMI

Abū Ḥamad Maḥfūẓ ibn `Abd al-Raḥmān al-Ḥaḍramī (16th c.), from Hadramawt, Yemeni astronomer.
See: SSM (133).
A1. [Treatise on Folk Astronomy] - is quoted in the work (No 960, A1) of Ba Makhrama.

962. MUHAMMAD AL-DAYLAMI

`Izz al-Dīn Muḥammad ibn al-Imām al-Wāthiq bi llāh al-Daylamī (16th c.), son and descendant of imams who came from Daylam, North-West Iran; Yemeni astronomer.
See: MAY (41-42), TIFI (338).
A1. Concise Zīj on Ephemerides of Five Planets, the Sun and the Moon (al-Zīj al-mukhtaṣar fī taqwīm al-kawākib al-khamsa wa'l-shams wa'l-qamar) = Supply for the Traveller (Zād al-musāfir) - Zabid (al-Ahdal).

963. GHIYATH AL-DIN AL-SHIRAZI

Mir Ghiyāth al-Dīn Manṣūr ibn Ṣadr al-Dīn Muḥammad al-Ḥusaynī al-Shīrāzī (d. 1542), from Shiraz; theologian, mathematician and astronomer.
See: KZ (II 201, 365, 499, III 15, 434, IV 170, 217, V 9, VI 505), MAA (189), MAMS (II 551-552), PL (II 82-83), PL2 (413, 417, 839, 1341).
M1. Sufficient on Arithmetic (Kifāya fi'l-ḥisāb) - Leiden (759/4).
M2. Essence of "Sufficient" for Pupils (Khulāṣat Kifāya al-ṭullāb) - Tehran (Sipahsalar 1364).
M3. Treatise on the Construction of Projection of Astrolabe (Risāla dar ṣan`at-i tasṭīḥ-i asṭurlāb) P - Mashhad (90, 5547). Treatise on stereographical projection.
A1. Treatise on Astronomy (Risāla dar hay`at) P - Leiden (1187).
A2. Completion of "Almagest" (Takmila-ya Majisṭī) P - Mashhad (5263).
A3. Keys of Astronomers (Mafātīḥ al-munajjimīn) = Treatise on Verification of the Zīj of Ulugh Beg (Risāla dar taṣḥīḥ-i zīj-i Ulugh Beg) P - Tehran (Univ. 2294/2). Commentary on zīj (No 816, A1) of Ulugh Beg.
G1. Treatise on Essence of Qibla (Risāla dar māhiyyat-i Qibla) P - Mashhad (5513).
Ph1. Rainbow (Qaws quzaḥ) - Najaf (Shushtari), Tehran (5638/97; Malik 4681/28; Milli 6075/26; Nafisi 384/5).

964. MUHAMMAD AL-RU`AYNI AL-MALIKI

Shams al-Dīn (Jamāl al-Dīn) Abū `Abdallāh Muḥammad ibn Muḥammad ibn `Abd al-Raḥmān ibn Ḥusayn al-Khaṭṭāb al-Ru`aynī al-Malikī originally from Morocco; died in Tarablus in 1547; mathematician and astronomer.
See: GAL (II 508), GAL2 (II 526), MAMS (II 552), OALT (128), SSM (87).
A1. Concise Treatise on the Knowledge of Determining the Prayer Times and Dates and Astronomical Operations without Instruments (Risāla (mukhtaṣara) fī ma`rifat istikhrāj awqāt al-ṣalāt wa shay' min al-tawārīkh wa'l-a`māl al-falakiyya min ghayr āla) - Cairo (mīqāt 77, Ṭal`at mīqāt 145, Taymūr riyāḍa 107), Istanbul (SM Reisülküttab 1184/14, Bağdadlı Vehbi 2145/3, Topkapı Revan Köşkü 2001), Vienna (Acad. 327). Description of the Vienna manuscript: Krafft [1] (5). Treatise in 10 chapters (on sexagesimal fractions, eras, movement of the Sun and the Moon, celestial circles, trigonometry, principles of astrology, prayer times, and the azimuth of Qibla); was written in 1525.
A2. Book on Rules and Principles of Knowledge of Determining the Qibla (Kitāb al-qawā`id wa'l-ḍawābiṭ fī ma`rifat istikhrāj al-Qibla) - Cairo (falak 3772).

965. HAFIZ AL-DIN AL-`AJAMI (AL-ACEMİ)

Ḥāfiẓ al-Dīn Muḥammad ibn Aḥmad al-`Ajamī (d. 1550), Ottoman scholar of Iranian origin; teacher at the Iznik madrasa (ancient Nicaea), Turkey.
See: KZ (III 458), MAMS (II 552-553), OALT (128-129).
Ph1. Treatise on Matter (Risāla fi'l-hayūlā) - is mentioned in KZ.
A1. al-Sab` al-Sayyār- is mentioned in OALT.

966. FATHALLAH FARUQI

Abu'l-Fatḥ Fatḥallāh ibn Muṣṭafā ibn `Abd al-Shakū Farūqī Isḥāqī (16th c.), Indian astronomer, lived in Shahpur, Bihar.

See: MAMS (III 41), PL (II 91), STMI (283-284).

A1. Seven Heavens (Sab` samāwāt) - Aligarh (Univ. Sup. nujum 1), Cambridge (Browne Sup. 755). Treatise on astrology and divination, written in 1656.

967. MUHIBALLAH ALLAHABADI

Muḥibballāh Allāhabādī (16th c.), Indian philosopher, from Allahabad, teacher of Mogul Prince Dara Shikoh.

See: STMI (494).

PH1. Treatise of Muhibballah Allahabadi (Risālat Muḥibballāh Allāhabādī) - Hyderabad (jadid 363). Treatise on metaphysics and physics.

968. IBRAHIM AL-JANADI

Ibrāhīm ibn `Alī ibn Muḥammad al-Janadī (16th c.), astronomer.

See: STMI (314).

A1. Sapphires in the Science of Timekeeping (al-Yawāqīt fī `ilm al-mawāqīt) - London (Sup. 110).

969. MUHYI AL-DIN PIRI RAIS (PİRİ REİS)

Muḥyi al-Dīn ibn Muḥammad Pīrī Raīs (1470-1553), born in Gelibolu (Turkey); Turkish admiral and "beylerbeyi" of Algeria; cartographer, author of two world maps including one of the oldest maps showing the coast of America; died in Cairo.

See: AGL (576-587), MAMS (II 552), Babinger [3] (EI), Ezgü [1] (IA), OALT (140), Soucek [1] (EI²), Tekeli [13] (DSB), [14], [17] (ENWC), OCLT (20-28).

AG1. Book of the Sea (Kitāb-i baḥriyya) T. Edition: Piri Reis [1]. German translation: Kahle [1].

Research: Kahle [2]. Research of the map of the coasts of America by Piri Reis: Kahle [3-4], Krachkovskiy [2], Taviani [1].

970. ABU ISHAQ

Abū Isḥāq ibn `Abdallāh (16th c.), Indian mathematician and astronomer, worked in Golconda.

See: MAMS (II 499-500), STMI (384).

M1. Commentary on "Sunny [Treatise]" (Sharḥ al-Shamsiyya) - Patna (2416), Tehran (Univ. 2417/1)

Commentary on the work (No 686, M1) of al-Naysabūri, written in 1555 in Golconda, dedicated to Amīr `Abd al-Karīm of Golconda.

971. NASIR AL-DIN HUMAYUN

Naṣīr al-Dīn Humāyūn ibn Ẓahīr al-Dīn Bābur (1506-1556), Mogul Emperor of India in Delhi and Agra between 1530-1540 and 1555-1556; son of Babūr (No 944).

See: MAMS (II 553), PL (I 536-540); Azimjanova and Baykova [1], H. Beveridge [1-2], Erskine [1], Gul-Badan Begum [1-2] (reminescences of his sister), Digby [1] (EI²), Lane-Poole [1] (322-330), Mirza Bala [1] (IA).

M1. Concise [Book] on Explanation of Great Circles (Mukhtaṣarī dar bayān-i dawā'ir-i `iẓām) P – Kabul (Ettelaat 217). The treatise was written for his son Jalāl al-Dīn Akbar, the future Emperor Akbar the Great (1556-1605).

972. TAQI AL-DIN AL-FARISI

Abū'l-Khayr Taqī al-Dīn Muḥammad ibn Muḥammad al-Fārisī (16th c.), from Fars, mathematician and astronomer, pupil of al-Shīrāzī (No 963).

See: GAL² (II 1024), KZ (I 383, IV 100, 167), MAMS (II 553-554), PL (II 83-85, 244), SSM (160), STMI (285-286).

M1. Revision of the Revision (Taḥrīr al-Taḥrīr) - Hyderabad (Mahdi). Revision of the work (No 606, M1) of al-Ṭūsī.

A1. Treatise on the Astrolabe (Risāla dar asṭurlāb) = Solution of the [Problems of] Astrolabe (Ḥall-i usṭurlāb) = Plane Astrolabe (Usṭurlāb-i musaṭṭaḥ) P - Madras (Firuz 60/3), Mashhad (30, 60; Gawharshad 1121), Najaf (Najafabadi), Patna (1651), St. Petersburg (Nat. PNS 229/1), Tehran (2437/1, 2452/5; Mishkat 1044; Univ. 954).

A2. Concise [Book] on the Construction of the Northern and Southern Astrolabe (Mukhtaṣar dar ṣan`at-i asṭurlāb-i shimālī u janūbī) P - St. Petersburg (Nat. PNS 229/2).

A3. Twenty Four Chapters (Bīst u chahār bāb) P - Najaf (Khwansari). Treatise on the astrolabe.

A4. Commentary on "Astronomy" of al-Qushjī (Sharḥ-i Hay`at-i Qūshji) P - Rampur (1187), Shiraz (Hashimi), Tehran (Mu`tamid 115/1). Commentary on the work (No 845, A1).

A5. Solution of [Problems of] Ephemerides (Ḥall-i taqwīm) = Solution of [Problems of] Ephemerides in the Science of Stars (Ḥall-i taqwīm fī `ilm al-tanjīm) P - Cairo (lughat 4349/2), Mashhad (44-45), Najaf (Shushtari).

A6. Selected from "Solution of [Problems of] Ephemerides" (Muntakhab-i Ḥall-i taqwīm) = Treatise on Selection (Risāla-yi intikhāb) P - Hyderabad (Salar hay'a 31), Kabul (Ettelaat 217/42). London (Ind. 2248), Mashhad (159; Bistami 358/2), Munich (346/7), St. Petersburg (Nat. PNS 229/3, 512/1), Tashkent (8485), Tbilisi (AS 534/2), Tehran (97/3; Univ. 2063/2, Adab. 184, 306/3, Ilah. 401/2). Description of the Tashkent manuscript: SVR (VIII 85-86). Abridgement of A5.

A7. Knowledge of the Qibla (Ma`rifa al-Qibla) - Mashhad (156, 179).

A8. Treatise on Problems (Risāla-yi masā'il) P – Kabul (Ettelaat 217/27), London (Ind. Ross. 270/1), Mashhad (61).

A9. Calculation of the [Movement of] the Moon (Ḥisāb al-qamar) - Tehran (Mahdawi 282/4).

A10. [Treatise on Terms of Theoretical Astronomy] - Cairo (lughat 4468/2),

A11. [Introduction to Astrology] - Cairo (lughat 4467/3).

A12. Commentary on the "Sun of Astronomy" (Sharḥ Shams al-hay'a) P - Patna 1187).

Ph1. Book on Optics (Kitāb al-manāẓir) - Jerusalem (Yehuda 384).

Ph2. Page of Light and Wisdom (Ṣaḥīfat al-nūr fī'l-ḥikma) - is mentioned in KZ (IV 100).

973. QUTB AL-DIN AL-QAINI

Quṭb al-Dīn ibn Sulṭān Muḥammad al-Qā'inī (16[th] c.), from Qain, astronomer.

See: MAMS (III 23), PL (II 85).

A1. Twenty Chapters on the Knowledge of Ephemerides (Bīst bāb dar ma`rifat-i taqwīm) P - Najaf (Ḥusaynī, Shushtarī), Patna (Sup. 2302), Tehran (Sipahsalar 525/3). The treatise was written in 1557.

974. ABU'L-KHAYR TASHKUBRI-ZADA (TAŞKÖPRİ-ZADE)

`Iṣām al-Dīn Abū'l-Khayr Aḥmad ibn Muṣliḥ al-Dīn Muṣṭafā Tashkubrī-Zāda (Taşköpri-zade) (1495-1560) born in Bursa, jurist and historian; taught at madrasas in Istanbul, Edirne, and Bursa (all in Turkey).

See: AGL (608-610), GAL (II 559-562), GAL[2] (II 633-634), GOW (84-87), KZ 4 (I 4, 31, 41, 153, 157, 166, 178-181, 184, 193, 198, 204-206, 211-215, 226-227, 235, 252, 270, 274, II 8, 42, 135, 173, 197, 208, 275, 320, III 36, 75, 80, 379, 384, 391-392, 414, 429, 455, 488, IV 65, 86, 112, 169, 269, 278, 299, 371, 406-407, 410, 477, 574, V 309, 338, 507, 613, VI 14, 18, 72, 79, 83, 226, 263, 323, 385, 411, 487, 644), MAMS (II 554-555), OALT (138-140); Aktepe [1] (IA), Babinger [5] (EI), Farmer [4] (64), OMLT (64-65).

E1. Key of Fortune and Lamp of Domination (Miftāḥ al-sa`āda wa miṣbāḥ al-siyāda) - Berlin (85), Cairo (VI 191, 200), Istanbul (SM Carullah 1136, Damat 1575), Leipzig (7), Paris (5948), Princeton (Houtsma 493, Yehuda 3248), Vienna (16). Editions: Taşköpri-zade [1-2, 4], Turkish translation by his son (Kemal al-Din Taşköpri-zade). German translation by O. Rescher: Taşköpri-zade [3]. Research: Krenkow [3]. Encyclopaedical and bio-bibliographical work, the main source for KZ 4.

E2. City of Science (Madīna al-`ulūm) - Cairo (VI 195), Vienna (17). Abridgement of E1, dictated by the author, who lost his sight, in 1560.

HS1. Flowers of Anemones for the Scientists of the Ottoman Empire (al-Shaqā'iq al-nu`māniyya fī `ulamā' al-dawla al-`Uthmāniyya) - is published as appendix to Ibn Khallikan [2]. Also published by Ahmet Suphi Furat, Istanbul 1985.

A1. Risāla fi Ma`rifat al-Taqāwīm- Manadili (820/49)

975. ILYAS AL-SARUKHANI AL-AQHISARI (AL-AKHİSARİ)

Ilyas ibn `Isā al-Ṣarukhānī al-Aqḥisārī (d. 1560), Turkish astronomer.
See: MAMS (III 20), OALT (137), OMLT (64).
M1. Miftāḥ al-Ḥussāb. Ankara (Milli 4077/2).
A1. Treatise on Stars (Risāla-yi nujūmiyya) P - Istanbul (Atıf 1701)
A2. Treatise on Almucantars (Risāla-yi muqanṭarāt) - Istanbul (Atıf 1698).

976. `ABD AL-QADIR AL-FARADI

Muḥyī al-Dīn Abū'l-Jūd `Abd al-Qādir ibn `Alī ibn Sha`bān al-Danjāwī al-Faraḍī al-Shāfi`ī al-Ṣūfī (15-16th c.); arithmetician, knew inheritance (al-faraḍī) well.
See: GAL² (II 1018), MAA (203), MAMS (II 555), SSM (79).
M1. Mean for Delight of Minds in the Science of Arithmetic (Wasīlat nuzhat al-albāb fī `ilm al-ḥisāb) - Alexandria (ḥisāb 16). Treatise was written in 1531.
M2. Book of Divine Discoveries on Commenting the "New Arithmetic Discoveries" (Kitāb al-futūḥāt al-rabbāniyya fī sharḥ al-Mubtakarāt al-ḥisābiyya) - Escorial (II 948/3). Description of the manuscript: Derenbourg [7] (79-80). Commentary on the work (No 815, M3) of Ibn al-Majdī.
M3. [Commentary on the "Comprehensive [Book] on Arithmetic"] - Cairo (falak 7229). Commentary on the work (No 783, M22) of Ibn al-Hā'im.
M4. [Commentary on "Poem on Finger Arithmetic"] - Cairo (riyāḍa. 674), Gotha (1495a), Princeton (Yehuda 1028). Commentary on the work (No 910, M1) of Ibn Maghribī.
M5. Concise [Book] on the Science of Arithmetic (Mukhtaṣar fī `ilm al-ḥisāb) - Berlin (6001), Cairo (falak 4614, riyāḍa. 888).
M6. [Notes on the Zakat Tax] - Cairo (`aqā'id 3964).

977. SIDI KATIB-I RUMI (SEYDİ ALİ REİS)

Sīdī `Alī ibn Ḥusayn Chalabī Kātib-i Rūmī Ghalaṭawī "Sīdī Ra'īs" (d. 1563), from Galata in Istanbul (Turkey), Turkish admiral, astronomer, and poet.
See: AGL (569-576), KZ (V 485), MAA (189-190), MAMS (II 555-556), OALT (140-145), OM (III 270-272), PL (II 76-77), SSM (171), TIFI (254-257); Adnan [1] (67-70), Azimjanova [2], Ferrand [6], Süssheim [2] (EI), Turan [1] (IA), Vambéry [1].
A1. Essence of Astronomy (Khulāṣat al-hay`a) T - Ankara (Milli Kütüphane A. 532), Berlin (168), Cairo (Fāḍil mīqāt Turkī 5/3, Taymūr riyāḍa. 137), Istanbul (AS 1273, 2591, 2615; NO 2911, 2933; SM Aşir 223, Serez 1918, Halet Efendi 532; Arkeoloji Müzesi No . 568; Kandilli 124; Cerrah Paşa Tıp Tarihi 180; Univ. TY. 1613), London (Sup. 7869), Oxford (2212), Rome (Vat. 19/3). In addition to those stated 11 manuscript copies are mentioned in OALT. Revision of the treatise (No 845, A1) of al-Qushjī.
A2. Mirror of the Universe (Mir`āt-i kā'ināt) T - Cairo (falak 3824/10 - Books IV and V, majlis fārisī 9/10, Fāḍil mīqāt Turkī 2 - Book IV, 6/4 - Book IV, 7/1, Kavala mīqāt 3/2 - Book IV), Istanbul (AS 2674-2675; Univ. 1824, 1804; NO 2950/1; SM Aşir Efendi 470/11; Arkeoloji Müzesi 584/6; BU Veliyuddin Efendi 2284/1; Kandilli 50/1; Belediye Cevdet K. 451), Izmirli (Milli, 492/3), Manisa (6590/5). In addition to those stated above, 9 manuscript copies are mentioned in OALT. Research: of the chapter of equatorial circle - Brice, Imber, and Lorch [1], of magnetic declination - Dizer [2]. Treatise in 5 books on astronomical instruments: astrolabe, almucantar and sine quadrants, armillary sphere, and equatorial semicircle.
A3. Treatise on Astronomy (Risāla-yi hay`at) T - Oxford (2213).
A4. Book of Travel on the Astrolabe, Sine Quadrant, Equatorial Circle, and the Instrument with a Throne (Siyāḥat-nāma-yi asṭurlāb rub` mujayyab `amal bi'l-jayb muqanṭarāt dā'ira al-mu`addal dhāt al-kursī) T - is mentioned in OM. Book in 120 chapters.
A5. Kitāb al-Muḥīṭ fī `İlm al-Aflāk va al-Abḥur. - Istanbul (Topkapı Revan Köşkü 1643; NO 2948), İbrahim Hakkı Konyalı (664/1).
A6. Risāla-i Dā'irat al-Mu`addil. - Istanbul (SM Aşir Efendi 470/5).
A7. Risāla-i Asṭurlab. - Bursa (Orhan Gazi 947/4), Istanbul (SM Aşir Efendi 470/10).
A8. Risāla-i Rub`i Mujayyab. - Istanbul (Kandilli 50/9; Millet, Ali Emiri 4622/4, 4622/5).

AG1. Comrehensive [Book] on the Science of Heavens and Seas (al-Muḥīt fī `ilm al-aflāk wa'l-abḥur) - Naples, Vienna (1277). Edition of the topographical chapter: Bonelli [1]. German translation of the same chapter by Bittner: Sidi Rais [2]. Research: AGL (569-576); Ferrand [6]. Exposition of sea science and corresponding astronomical information including contents of the works (No 904, AG1) of Ibn Majid and (No 956, AG2) of al-Mahri.

G1. Mirror of Countries (Mir`āt al-mamālik) P. Edition: Sidi Rais [1]. English translation by Vambery: Sīdī Ra'īs [3], Uzbeki translation by Zunnunov: Sidi Rais [4].

978. ZAYN AL- NAJIM

Zayn al-Najīm (16th c.), timekeeper.

A1. Removal of Shrouds of the Times of Prayers `Asr and `Isha (Ra`f al-ghishā' `an waqtay al-`aṣr wa'l-`ishā') - Cairo (Taymūr riyāḍa. 106/10). Treatise was written in 1545.

979. ABU SHAKIR

Abū Shākir (16th c.), deacon of the Christian church Mu`allaqa in Cairo, theologian and astronomer.

See: Neugebauer [8].

A1. Calculation of the World (Ḥisāba `ālam). Only the Ethiopian translation is extant. Research: Neugebauer [8].

980. RADI AL-DIN IBN AL-HANBALI

Raḍī al-Dīn Abū `Abdallāh Muḥammad ibn Ibrāhīm ibn Yūsuf ibn al-Ḥanbalī al-Ḥalabī (d. 1563) from Aleppo; jurist, historian, poet, mathematician, and physician.

See: GAL (II 483-484), GAL^2 (II 495-496), KZ (I 155, 170, 465, 480, 505, II 19, 60, 101, 126, 268, 285, 410, III 18-19, 83, 105, 118, 188, 245, 380, 474, 553, 632, IV 20, 41, 176, 191, 197, 202, 208, 334, 402, 414, 554, V 176, 257-258, 300, 491, 577, 584, 604, 650, VI 79, 125, 287, 311, 329, 349, 463), MAA (190), MAMS (II 556), OMLT (65-68), SSM (86).

M1. Memoir for those who have Forgotten (Tadhkirat man nasiya) - Oxford (I 967/3). The complete list is given in OMLT. Treatise on foundations of geometry.

M2. Signs of Beauty in Problems of Measurement (Makhā'il al-malāḥa fī masā'il al-misāḥa) - Cairo (falak 4301/2), Paris (2474), Princeton (Yehuda 484). The complete list is given in OMLT. Treatise on survey based on the work (No 602, M1) of Ibn Thabāt.

M3. Aim of the Reckoner and Support of the Book-keeper (Bughya al-ḥāsib wa `umdat al-muḥāsib) - Berlin (5981), Cairo (falak 4301/1, riyāḍa. 557/1). The complete list is given in OMLT. Description of the Berlin manuscript: Ahlwardt [1] (377). Commentary on the work (No 783, M7) of Ibn al-Hā'im.

M4. Removal of Disputes on Rules of Arithmetic (Raf` al-ḥijāb `an qawā`id al-ḥisāb) - Cairo (riyāḍa. 557/4). Commentary on the work (No 783, M3) of Ibn al-Hā'im. The complete list is given in OMLT.

M5. Number of Arithmeticians and Support of the Reckoner (`Iddat al-ḥāsib wa `umdat al-muḥāsib) - Cairo (Taymūr riyāḍa. 152). Commentary on the work (No 783, M7) of Ibn al-Hā'im.

981. MUHAMMAD AGHA AQBUNARI (AL-AKPINARİ)

Ḥājjī Muḥammad Āghā ibn `Abdallāh Āqbūnārī (16th c.), Turkish mathematician, worked at the court of Ottoman Sultan Süleyman I (the Magnificent) (1520-1566).

See: MAMS (II 557), OM (III 263), OMLT (98).

M1. The Sun of Two Nights (Shams-i laylān) - is mentioned in OM. Treatise was written in 1546.

982. `ABD AL-`AZIZ AL-AKHDARI

`Abd al-`Azīz ibn Aḥmad ibn Muslim al-Akhḍārī (16th c.), astronomer.

See: OALT (112-113), SSM (142).

A1. Commentary on "Poem on Lunar Stations" (Sharḥ Manẓūma fī manāzil al-qamar) - Cairo (falak 8523/1, 18361). Treatise was written in 1532.

A2. al-Yawāqit fī `Ilm al-Mawāqit- Istanbul (SM Raşid Efendi Mülhak 9325/1)

983. GHARS AL-DIN KHALIL AL-HALABI

Ghars al-Dīn Khalīl ibn Aḥmad al-Naqīb al-Ḥalabī (d. 1563), born in Aleppo, studied in Damascus and Cairo, worked in Cairo and Istanbul, died in Istanbul.

See: GAL (II 593-594), GAL^2 (II 665), KZ (III 402), MAA (190), MAMS (II 557), OALT (145-149), OMLT (73-75), SSM (78).

M1. Memoir for Scribes on the Science of Arithmetic (Tadhkirat al-kuttāb fī `ilm al-ḥisāb) - Beirut (235/1). The complete list is given in OMLT. Treatise was written in 1563.

A1. Treatise on the Sine [Quadrant] (Risāla fī'l-jayb) - Cambridge (Palm. 35/31).

A2. Treatise on the Science of the Sine [Quadrant] (Risāla fī `ilm al-jayb) - Cambridge (Palm. 32).

A3. Treatise on Operations with the Sine [Quadrant] (Risāla fī'l-`amal bi rub` al-jayb) = Treatise on the Sine Quadrant (Risāla `alā al-rub` al-mujayyab) - Alexandria (fun. 65/8), Berlin (5825, 4525), Cairo (Fāḍil majlis 180/16, Ṭal`at mīqāt 255/4), Dresden (3/5), Leiden (991/5), Paris (2544/1, 2547/5), Garrett (4919), Istanbul (Kandilli 123/5, Carullah 1470, Hasan Hüsnü 1125/11), Leiden (991/5), Manisa (470/3, 8009/7, 2967/12). In addition to those stated above 11 manuscript copies are mentioned in OALT. Description of the Berlin manuscript: Ahlwardt [1] (243). Research of measurements to non-available objects: Wiedemann [36] (60).

A4. Treatise on Knowledge of the [Azimuth of] Qibla (Risāla fī ma`rifat al-Qibla) - Berlin (IGMN II 36), Berlin (IGMN II 36), Cairo (Fāḍil mīqāt 114, mīqāt Turkī 7/6, Taymūr riyāḍa. 342), Manisa (470/4).

A5. Rules of Determining the Azimuth of Qibla and Times [of Prayers] by Approximate Methods without Instruments (Qawā`id fī ma`rifat samt al-Qibla wa'l-awqāt bi aqrab al-ṭuruq wa ashal al-ālāt) T- Cairo (mīqāt Turkī 7/6, Fāḍil majlis 180/19 - anonymous), Manisa (470/4).

A6. Ḥ āshiya `alā Qism al-Falakiyyyāt min al-Mawāqit fī `Ilm al-Kalām.

A9. Kitāb li `Ilm al-Zayirja.

A10. Tanbīh al-Nuqqād `alā mā fī'l-Hay'a al-Mashhūra min al-Fasād. - Istanbul (Yeni Cami 1181/18).

A11. Taḥrīr al-Wuṣūl ilā Nihāyat al-Su'l.

984. `ABD AL-RAHMAN AL-AKHDARI

`Abd al-Raḥmān ibn al-Walī al-Ṣāliḥ al-Sayyid al-Ṣaghīr al-Akhḍārī (1510-1575), Maghribi mathematician and astronomer.

See: GAL (II 614-615), GAL^2 (II 705-706), MAA^2 (183), MAMS (II 559), OALT (186), OMLT (78-79), SSM (142).

M1. White Pearl on the Better of Sciences and Things (al-Durra al-bayḍā' fī aḥsan al-funūn wa'l-ashyā') = Text of Pearl on the Science of Arithmetic and Inheritance (Matn al-durra fī `ilm al-ḥisāb wa'l-farā'iḍ) - Cairo (`ulūm 20411, 22581), Princeton (1041). The complete list is given in OMLT. Description of the Princeton manuscript: Hitti, Faris and `Abd al-Malik [1] (327). Edition: al-Akhdari [1]. Poem on arithmetic and inheritance.

A1. Lamp on the Science of Celestial Sphere (al-Sirāj fī `ilm al-falak) - Algiers (1451), Tunis (Nat. 17905, 17951, 18029). Edition: al-Akhḍarī [2].

985. MUHAMMAD AL-HADI TAJ AL-SA`IDI

Abū'l-Fatḥ Muḥammad al-Hādī ibn Abī Sa`īd (Sayyid) al-Ḥusaynī al-`Iraqī (al-Ardabīlī) Tāj al-Sa`īdī (al-Sayyidī) (15-16th c.), from Ardabil, pupil of al-Rūmī (No 808), worked in Samarkand and in Iraq; mathematician and astronomer.

See: GAL^2 (I 850), GAS (V 115), KZ (I 209-210, 322), MAMS (II 557-558), PL (II 65-66), SSM (158), STMI (325).

M1. Super-commentary on Commentary on "Propositions of Substantiation" (Ḥāshiya fī sharḥ Ashkāl al-ta'sīs) - Berlin (5943), Cairo (riyāḍa. 26, Ṭal`at riyāḍa. 118/2), Hyderabad (I 66), Istanbul (Köprülü 337; SM Fatih 3401/3, Serez 3882), London (Sup. 765/5), Princeton (Yehuda 4777). Description of one Cairo manuscript: Sayyid [1] (42). Edition: in the book al- Samarkandi [1]. Super-commentary on the commentary (No 808, M2) by al-Rūmī on the work (No 655, M2) of al-Samarkandī.

M2. Treatise on the Possibility of Trisection of an Angle (Risāla fī imkān tathlīth al-zawāyā) - Istanbul (SM Laleli 2732).

M3. Sine in the System of Circle (Jayb-i tartīb-i dā'ira) P - Tehran (2924/3, 3451/3).

A1. Subtleties of Speech on Stars (Laṭā'if al-kalām fī aḥkām al-a`wām) P - Berlin (340), Bombay (Nadhir 256), Istanbul (BU Veliyuddin 2279-2280; SM Esat 2000), London (5587/1), Mashhad (151), Najaf (Husayn.), Oxford (2741), Paris (2407), Kazan (8), Rampur, Tehran (Univ. 937).

A2. Treatise on Astronomy (Risāla dar hay`at) P - Tehran (Univ. 3219/2).

986. AHMAD AL-ZUNURI

Aḥmad ibn `Abdallāh al-Zunūrī (d. 1569), astronomer.

See: MAMS (II 558).

A1. Poem on Properties of [Lunar] Stations (Urjūza fī waṣf al- manāzil) - Rabat (2520).

987. SHA`BAN AL-QASTAMUNI (AL-KASTAMONİ)

Sha`bān Khalīfa ibn Ḥasan (Ḥusayn) al-Qāḍī al-Qaṣṭamunī (d. 1570), from Kastamonu (Turkey), Turkish astronomer.

See: MAMS (III 46), OALT (158-159), OM (III 276).

A1. Treatise on the Sundial (Risāla fi'l-rukhāma) - Istanbul (SM Şehit 2795/10).

A2. Treatise on the Celestial Equator and Operations with its Instrument (Risāla fī mu`addil al-nahār wa'l-`amal bi ālatihi) - is mentioned in OM.

A3. Risāla fi'l-`Amal bi Rub` al-Mujayyab-is mentioned in OALT.

A4. Risāla fī Ma`rifa Waḍ` al-Muqanṭarat- Istanbul (SM Şehid Ali 2765/9, T. Univ. BTTAM). Konya (Bölge Yazmalar 224/28)

988. HAYDAR AL-HUSAYNABADI

Ḥaydar ibn Aḥmad al-Kurdī al-Ḥusaynābādī (16th c.), mathematician and astronomer.

See: MAMS (III 41), SSM (158).

M1. [Super-commentary on Commentary by al-Rūmī on "Substantial Propositions"] - Cairo (mīqāt 1082/9). Super-commentary on commentary (No 1074, M2) of al-Aẓharī, on the work (M2) of al-Samarkandi (No 655.

A1. Tables of Positions of Surplus of Turn (Jadāwil li-waḍ` faḍl al-dā'ir) - Cairo (mīqāt 106). Description of the manuscript: Kunitzsch [1] (29).

989. NUR AL-DIN IBN ZUNBUL AL-MAHALLI

Nūr al-Dīn Aḥmad ibn `Alī Zunbul al-Maḥallī al-Munajjim "Ibn Zunbul" (d. ca 1570), Egyptian astrologer (al-munajjim = astrologer).

See: GAL (II 384-385), GAL² (II 409-410), KZ (III 226), MAA (190), MAMS (II 558), OALT (183-184), SSM (85).

E1. Law of the World (al-Qānūn fi'l-dunyā) - Berlin (5889). Description of the manuscript: Ahlwardt [1] (285-287). Books 22-23 are devoted to astronomy and astrology.

A1. Gift to Kings (Tuḥfat al-mulūk) - Oxford (I 892).

A2. Book of Books and Solution of Difficulties (Kitāb al-maqālāt wa ḥall al-mushkilāt) - Cairo (Fāḍil ḥuruf 86), Damascus (3582), Istanbul (Selim Ağa 547, Arkeoloji Müzesi 559). Treatise on astrology and magic in 30 books.

990. MUSTAFA AL-SALIMI QOJA SA`ATJI (AL-MUVAKKİT)

Muṣṭafā ibn `Alī Muwaqqit al-Salīmī "Qoja Sa`ātjī" (d. 1571), Turkish mathematician, astronomer, clock-maker (sa`atjī) known as "Koca Saatçı" because he was the timekeeper at the Yavuz Selim mosque in Istanbul; later he became the chief astronomer and was known as "Müneccim-başı Mustafa Çelebi".

See: AGL (596), KZ (II 226, 296, 485), MAMS (II 549-550), OALT (161-177), OM (III 300-301), SSM (170-171, 174), TIFI (286-287).

M1. Treatise on Measurement (Risāla fi'l-saḥiyya) - Istanbul (NO 2920).

A1. Rapid Treatise on Explanation of the Instrument with a Throne [Made by the] Art (Risāla-yi surī`a fī al-kursī al-ṣinā`ī) = Treatise on Operations with Instrument with a Throne (Risāla fi'l-`amal bi dhāt al-kursī) T -

Cairo (Fāḍil majlis 180/20, Khalīl mīqāt 10/11), Istanbul (TK 1346/1, 2898/1, BU Veliyuddin Efendi 2282/8. 2317/3; Univ. TY. 2034, 4169; Topkapı Hazine 454/1, Topkapı Emanet Hazinesi 1729/1; Millet, Ali Emiri Arabi 4248/4; Kandilli 7/1, 20; SM Laleli 3642/5, Hacı Mahmud 6514/9, 5692, Hüsrev Paşa 259/3), Wroclaw (I 126) In addition to those stated above 10 manuscript copies are mentioned in OALT. Treatise in 30 chapters.

A2. Treatise on Determining the Altitude with the Quadrant (Risāla fī akhdh al-irtifā` bi'l-rub`) - Istanbul (Köprülü 342).

A3. Treatise on the Astrolabe (Risālat al-asṭurlāb) T - Istanbul (NO 2916, BU Veliyuddin Efendi 2268; Millet, Ali Emiri riyāḍa. 200; Topkapı Hazine 454/2, 461; Univ. TY. 4843; Kandilli 7/2, 50/15; Cerrah Paşa Tıp Tarihi 301/1; SM 1037/2). In addition to those stated above, 21 manuscript copies are mentioned in OALT.

A4. Sufficient Time for Determining Turn, its Surplus and Azimuth (Kifāyat al-waqt li ma`rifa al-dā'ir wa faḍlihī wa'l-samt) T - Amsterdam (209), Baku (A 199/2), Cairo (falak 3833/4) – chapter 35, 3833/5 - chapter 36, Fāḍil majlis 180/15, mīqāt Turkī 7/4, Khalīl mīqāt 10/12, Ṭal`at mīqāt Turkī - 5/2 - a fragment), Istanbul (Millet, Ali Emiri 768-769), London (Sup. 7892/1), Oxford (2209), Tehran (Univ. 1972/4), Vienna (Asad. 350). Cairo (Fadıl Majlis 180/15), Istanbul (SM Aşir Efendi 470/3, Şehid Ali 279/11, Amcazade Hüseyin 332/2, 435/2; Köprülü 1598/13; NO 2947/2, Feridun Nafiz Uzluk 7031/1; Kandilli 132/4, 41/1, 55, 50/8, 352-1/1, 192/1, . 345/1, 9/1), Konya (Mikail Bayram collection 1/4), Wien (1430/1). In addition to those stated above, 95 manuscript copies are mentioned in OALT. Two versions: in 12 and 24 chapters.

A5. Treatise on the Sine [Quadrant] (Risālat al-jayb, Risāla rub`-i mujayyab) T - Cairo (falak 1822/7, Ṭal`at mīqāt Turkī 21/2, Taymūr riyāḍa 301/2), Istanbul (Millet, Ali Emiri 371), Tehran (univ. 1972/4). Treatise in 22 chapters.

A6. Treatise on the Quadrant (Risāla rub`) T - Istanbul (Atıf 1699).

A7. Simplification of Timekeeping in the Science of Time (Tas'hīl al-mīqāt fī `ilm al-awqāt) T - Cairo (Ṭal`at majlis 366/2), Istanbul (Topkapı Hazine 474, 454/3; NO 2947/3; Univ. TY. 1824/3, 1467/3, 5597 SM Ayasofya 2616/1, Atıf Efendi 1699/2, Esad Efendi 2016/4, 2011/2, Halet Efendi 531/1), Oxford (2210). In addition to those stated above, 41 manuscript copies are mentioned in OALT. Treatise in 25 chapters.

A8. Treatise on Determining the Visibility of the Crescent (Risāla fī istikhrāj ru'yat al-hilāl) T - London (Sup. 7392/2).

A9. [Astronomical Treatise] - Manchester (Lind. 107).

A10. Treatise on the Solution [of Problems] of Equatorial Circle (Risāla fī ḥall dā'irat-i mu`addal) T - Cairo (Halil Ağa mīqāt 10/9, Ṭal`at mīqāt 154/6) Çorum (3018/18), Diyarbakır (958/12), Istanbul (NO 4891/4, 4942; Kandilli 1, 50/3, BU Veliyuddin Efendi 2282/9; Hacı Mahmud 6514/10, Fatih 3442/10; Belediye Ali Emiri riyāḍa. 223; Cerrah Paşa Tıp Tarihi 82/3, Univ. TY. 6603, 994, 2895/8), Manisa (1479, 6590/8). Treatise in 9 chapters, written in 1532, dedicated to Iyas Pasha. OM mentions his astronomical works:

A11. Gift of Time and the non-pierced Pearl of Time (Tuḥfat al-zamān wa kharīdat al-awān) - dedicated to Ottoman Sultan Süleyman I (1520-1566). British Museum Add. (7896), Istanbul (Arkeoloji Müzesi 1087; NO 2993; Univ. TY. 6591/1), Izmirli (Milli 35/248), Wien (1432).

A12. Construction of the Astrolabe (`Amal-i asṭurlāb) T.

A13. Treatise on the Almucantar (Risālat al-muqanṭara). Treatise was written in 1529.

A14. Treatise on the Sine [Quadrant] of Horizons (Risāla-yi jayb āfāqī) -Afyon (17607/2, 17609/2), Amasya (1565/4, 1050), Bursa (Genel 788/2, 789/2), Cairo (301/2, mīqāt 573/2 - anonymous, Fāḍil majlis 1801/10, Fadıl mīqāt Türki 3, Talat Majlis Türki 156 Talat mīqāt Türki 21/2), Diyarbakır.(430/2), Edirne (Selimiye 4725), Erzurum (Atatürk Üniversitesi SÖ. 18939/5, 18858/2), Istanbul (SM Aşir 470/4, Amcazade Hüseyin 453/1, Yazma Bağışlar 1847/5, Fatih 5331/7, Halet Efendi 523/25, Hüsrev Paşa 236/8, Izmirli 492/1, 494/1, Esad Efendi 3569/5, Atıf Efendi 897/2, Hüsrev Paşa 237/1, Hasan Hüsnü 1293/2; Belediye K 16; Kandilli Rasathanesi 57-2/3, 132/1 Cerrah Paşa Tıp Tarihi 82/4, 301/3; Arkeoloji Müzesi 881/7; Topkapı III. Ahmed 3488/2; Millet, Ali Emiri Türki riyāḍa 214/3, 371; Univ. TY. 3232/1, 3232/3), Izmirli (Milli Dolap 50 sıra 252/1 depo 25614), Konya (Yusuf Ağa 8199/1, Mikail Bayram collection 1/5), Mostar (Devlet Arşivi 18/1), Tehran (Univ. 1972/4), Wien (1430/2).

A15. Enrichment of Celestial Stars for the Fortune of the Noble Power of Süleyman (Taysīr al-kawākib al-samā'iyya li-sa`d al-qawiya al-sharīfa al-Sulaymāniyya) T - is mentioned in KZ.

A16. Treatise on the Science of Astronomy (Risāla fī `ilm ḥisāb al-nujūm)- Istanbul (NO 2947).

A17. I`lām al-`Ibād fī A`lām al-Bilād. - Ankara (Milli Kütüphane A 2053/4), Baghdat (Awkaf 12277), British Museum (Add. 7892/2), Bursa (Orhan Gazi 1097/2, Ulucami 2415/1), Cairo (8/3, Kavala mīqāt 6/6, Fadıl Mīqāt Türki 7/5, Talat MaJāmi Türki 108.) Istanbul (SM Hacı Mahmud 5633, Esad Efendi 2016/6, Lala İsmail 284/8, Fatih 5419/3, Aşir Efendi 438/9, Reisülküttab 1008; Arkeoloji Müzesi 1584; NO 2991, 2920/1,

2914/8, Ali Emiri riyāḍa. 209/2; Belediye Muallim Cevdet K 260/5, Coğrafya 5/2, Kandilli 113, 98, 180/7), Kraftt (321), Manisa (1463/2), Konya (Mikail Bayram collection 1/1), Wien (1274, 1287).

A18. Kifāyat al-Kanū' fī al-`Amal bi al-Rub` al-Maktū`. - Istanbul (Arkeoloji Müzesi 881/2; SM Izmirli İsmail Hakkı 4039/18; Kandilli 357/1; Ali Emiri Riyāḍa. 217/3).

A19. Risāla fī al-`Amal bi'l-Rub` al-Mujayyab. - Amasya (698/3), Cairo (Fāḍil mīqāt Turkī 7/4), Gaziantep (368, 383), Istanbul (Arkeoloji Müzesi 881/4), St. Petersbourg (Mss. Or. 547/1).

A20. Risāla al-Masarrāt fī `Ilm al-Mīkāt. - Cairo (Ṭal`at Majāmi Turkī 156), Istanbul (SM Nafiz Paşa 1267, Hüsrev Paşa 236/7, Izmirli 491).

A21. Risāla fī Ma`rifat al-Sā`āt. - Bursa (Genel 2107), Istanbul (Arkeoloji Müzesi 881/5).

A22. Risāla fī `İlm al-Falak. - Cairo (Talat Majlis Turkī 168).

A23. Risāla-i Rub`-i Mujayyab. - Cairo (mīqāt Turkī 10).

A24. Tashīl al-Mīqāt wa Ta`yīn al-Awqāt. - Ankara (Milli Kütüphane A. 2034/4), Balıkesir (Dursun Bey 86), Bursa (Ulucami 2414), Cairo (Ṭal`at majlis 932, 10), Erzincan (117/1), Istanbul (SM Lala İsmail 293/2, Reisülküttab 479/4; Univ. TY. 3432/4, 6479/2, 2774/1), Konya (Bölge Yazma Eserler 985).

A25. Tartīb Tashīl al-Mīqāt. - Istanbul (SM Serez 1921).

A26. Wāfiyat al-Awqāt. - Ankara (Milli kütüphane A. 2053/2, A. 2510/1, A 2974), Balıkesir (1248/2), Bursa (Orhan Gazi 947/5), Istanbul (Üsküdar Selim Ağa Kemankeş . 371; SM Carullah 1471/3; Kandilli 410/2).

A27. Risāla-i Rub`-i Mujayyab. - Istanbul (SM Muğla Hoca Mustafa 505/8).

A28. Mir'at al-Kā'inat. - Istanbul (SM Tırnovalı 1858/3).

A29. Risāla-i Muqanṭarāt. - Ankara (Milli Kütüphane 2261/1, A. 2034/5), Istanbul (Cerrah Paşa Tıp Tarihi 301/4).

A30. Risāla-i Rub` al-Mujayyab. - Ankara (İl Halk 23/4, Milli Kütüphane A. 2501).

A31. Risāla-i Muqanṭarāt. - Ankara (İl Halk 23/3), Istanbul (Topkapı yeniler 4023).

A32. Risāla-i A`mal-i Asṭurlab. - Konya (Mikail Bayram collection 1/2).

A33. Risāla fī Rub` al-Muqanṭarat. - Erzurum (Atatürk Üniversitesi SÖ. 18860, 18858/1), Istanbul (SM Yazma Bağışlar 2659, Izmirli 494/2, Bağdadlı Vehbi 995; Univ. TY. 9846; Millet, Ali Emiri riyāḍa. 214/2).

A34. Risāla-i Jayb-i Rub` al-Dā'ira. - Konya (Koyunoğlu 12139/2).

A35. Risāla fī al-`Amal bi al-Rub` al-Mujayyab. - Istanbul (SM Yazma Bağışlar 2605).

A36. Sphere and Astrolabe (Kura wa asturlāb).

A37. [Astronomical Treatise] - Manchester (Lind. 107).

A38. Treatise on the Science of Astrology (Risāla fī `ilm ḥisāb al-nujūm) - Istanbul (NO 2947).

G1. Information for Slaves [of God] on Determining Distances in Geography (I`lām al-`ibād bi `ilm al-ab`ād fī jughrāfiyā) = [Arabic Version of the Treatise on Seven Climates] - Cairo (mīqāt 8/3 -a fragment), Istanbul (Millet, Ali Emiri 359; SM Mihrişah 304/3; Kılıç 582). Treatise was written in 1525.

G2. [Turkish Version of the Treatise on Seven Climates] T - Cairo (Fāḍil mīqāt Turkī 7/5, Kavala mīqāt 6/6).

991. YUSUF BURSAWI (AL-BURUSAVİ)

Yūsuf ibn Kāmal al-Bursawī "Iskandar" (16th c.), from Bursa (Turkey), worked in Istanbul under Ottoman Sultan Selim II (1566-1574); mathematician.

See: KZ (III 648), MAMS (II 559), OM (III 309), OMLT (99-100), STNI (425).

M1. Collection on Arithmetic (Jawāmi` al-ḥisāb) - Cambridge (Sup. 350) - is mentioned in KZ and OM. The complete list is given in OMLT.

992. `ABD AL-MAJID AKBAR-SHAHI

`Abd al-Majīd ibn Muḥammad Quṭb al-Dīn Munajjim Akbar-Shāhī (16th c.), astronomer.

See: STMI (276).

A1. Treatise on Astronomy (Risāla dar hay'a) P - Rampur (1197).

993. MUHAMMAD IBN TULUN AL-DIMASHQI

Shams al-Dīn Muḥammad ibn `Alī ibn Muḥammad ibn Ṭūlūn al-Dimashqī (16th c.), from Damascus; theologian, mathematician and astronomer.

See: GAL (II 481-483), GAL^2 (494), SSM (85), TIFI (310-311).

M1. Detailed Responses on Questions of Ignorants (al-Ajwiba al-mu'allala fi'l-masā'il al-mujahhala) - Cairo (riyāḍa. 839). Selected problems in simple applied mathematics.

994. MUSLIH AL-DIN AL-LARI AL-ANSARI

Muṣliḥ al-Dīn Muḥammad ibn Ṣalāḥ ibn Jalāl al-Sa'dī al-'Ibādī al-Lārī al-Anṣārī (d. 1571), from Lar, Iran, astronomer, pupil of al-Shīrāzī (No 963); worked in India under Mogul Emperor Humayun (No 971). He left India and finally settled in Istanbul where he died.

See: GAL (II 420), GAL² (II 620), GOW (94-95), KZ (I 241, 257, 478, II 143, 405, 481, III 17, 458, IV 34, 70, 168, 400, 408, V 11, 480, VI 238, 474), MAA (190-191), MAMS (II 559-560), OALT (179-183), PL (I 116-118, II 77, 229), PL² (413-415), STMI (336).

M1. Geometric Problems (Handasiyyāt) - Baku (2790).

A1. Commentary on the "Treatise of Conquest" (Sharḥ risāla-yi fatḥiyya) = Commentary on al-Qushjī's Treatise on Astronomy (Sharḥ-i risāla-yi Qūshjī dar falakiyyāt) = Persian Treatise on Astronomy (Risāla-yi fārisiyya dar hay'at) = The Book of Humayun (Humāyūn-nāma) P - Aligarh (Azad Subh. 110/3, 520/16), Diyarbakır (926), Cairo (Ṭal'at falak fārisī 15, majlis fārisī 26/4), Hyderabad (riyāḍa. 210; Salar hay'a 22), Istanbul (NO 2933, 2938; SM Fatih 3500, Serez 1920, Hamid. 815, Halet Efendi 529/1; Ragıp Paşa 926; BU Veliyuddin 2316/1, 2307/2;), Jerusalem (Yehuda 327), Kastamonu (515/1), Konya (735/3, Yusuf Ağa 308/1), Mashhad (5344, 5376; Gauharshad 469, 653/3, 1476/1; Mawlawi 470/1), Paris (2367), Patna (1051-1052), Princeton (74), Rampur (1195), St. Petersburg (Nat. 315/1), Tashkent (3868/2), Tehran (5323; Malik 6267/1; Milli 687/1, 8967/2; Sipahsalar 602, 6267/1, 7428/1), Vienna (1423). In addition to those stated above, 31 manuscript copies are mentioned in OALT. Russian translation of the St. Petersburg manuscript by Usmanov: al-Lari [1]. Research: Khatipov and Usmanov [1], A. Usmanov [1]. Commentary on the treatises (No 845, A7-A8) of al-Qushjī. Treatise in 2 books plus introduction, is dedicated to Emperor Humayun.

A2. Astronomical Question and Answer (Sual wa jawāb-i falakī) P - Tehran (Senat 7572/14).

A3. Treatise on Investigation of Line of Dawn and Twilight (Risāla fī taḥqīq khaṭṭ al-ṣubḥ wa'l-shafaq) - Tehran (Senat 7572/15).

995. ABU'L-HASAN AL-ABIWARDI

Abū'l-Ḥasan ibn Mīr Jalāl al-Dīn Aḥmad al-Abīwardī, known as "Dānishmand" ("sage" in Persian) (16th c.), from Abiward, Khurasan, mathematician, astronomer, and philosopher.

See: KZ (II 480, III 105-106, IV 77, V 74, 480, 552), MAMS (II 560).

M1. Solution of the Unsolved (Ḥall mā lā yunḥal) - is mentioned in KZ III (105-106) as treatise containing many mathematical propositions.

M2. Sunrises in the Science of Mathematics (Mashāriq fī fann al-riyāḍa) - is mentioned in KZ (V 552).

A1. Mirror of Celestial Spheres on Prescriptions [of Stars] and Astronomy (Mir'āt al-aflāk fī'l-aḥkām wa'l-hay'a) - is mentioned in KZ (V 480).

Ph1. Book of Beauty (Kitāb al-ḥasnā') - is mentioned in KZ (V 74).

996. ABU YAZID AL-BISTAMI

Abū Yazīd al-Bisṭāmī (16th c.), astronomer.

A1. [Astronomical treatise] - Cairo (mīqāt 639/6). Treatise was written in 1575.

997. SHIHAB AL-DIN AL-GHAZZI AL-MAGHRIBI

Shihāb al-Dīn Aḥmad ibn Muḥammad ibn Muḥammad ibn Jibrīl al-Ghazzī al-Maghribī (1525-1575), Egyptian astronomer from Maghrib.

See: GAL² (II 154), MAA (191), MAMS (II 560-561, III 14-15), OMLT (79-81) SSM (87).

M1. Commentary on the Book "Delight of Observers in the Science of Ghubar" (Sharḥ kitāb Nuzhat al-huẓẓār fī 'ilm al-ghubār) - Berlin (5982-5982a), Cairo (falak 6830, majlis 861/7, riyāḍa. 181/8, 617, 816, Taymūr riyāḍa 123), Oxford (I 966). Princeton (Yehuda 247, 902, 3062, 3113, 3846). The complete list is given in OMLT. Description of the Berlin manuscripts: Ahlwardt [1] (338). Description of the Cairo manuscript falak 6830: Sayyid [1] (59). Commentary on the treatise (No 783, M7) of Ibn al-Hā'im.

998. MUHAMMAD AL-GHAZZI

Muḥammad ibn Aḥmad al-Ghazzī (16th c.), Egyptian mathematician.
See: SSM (87), OMLT (174-175).
M1. First Appointment for Minds on Commenting "Concise Exposition of Arithmetic Operations" (Takhṣīṣ ūli al-albāb fī sharḥ Talkhīṣ a`māl al-ḥisāb) - Cairo (riyāḍa. 819), Madina (Hikmat 480/10). Commentary on the work (No 696, M1) of Ibn al-Bannā.

999 MUHAMMAD AL-SHINSHAWRI

Bahā al-Dīn Muḥammad Ibn `Abdallāh ibn al-Shinshawrī (1483-1574), pupil of al-Suyūṭī (No 945); mathematician.
See: GAL (II 216), GAL² (II 216), MAMS (II 561), SSM (86).
M1. Commentary on "Gift to Friends" (Sharh Tuḥfa al-ah'bāb) – Alexandria (hisab 100), Cairo (riyad. 286), Calcutta (1486), Hyderabad, 7; I 798, Jerusalem (21), Mahachqala (921/2), Rampur (I 415-139). Commentary on the work M1 of Sibt al-Maridini (No 873).

1000. PARWIZ AL-RUMI (PERVİZ ABDULLAH)

Parwīz `Abdallāh ibn Abdallāh al-Ḥanafī al-Rūmī (d. 1579), Ottoman scholar, philosopher and astronomer.
See: KZ (II 412, 456, 458), MAMS (II 561), OALT (189-190).
A1. Subtleties of Heaven (Mirqāt al-samā) T -Ankara (İl Halk 2312), Bursa (Haraççıoğlu 1182), Eskişehir (77, 2), Istanbul (NO 2949, SM Ayasofya 2403, TK Haz. 473, 1182, Kandilli 485). Revision of the work (No 845, A1) of al-Qushjī.

1001. NASUH AL-SALAHI AL-MATRAQI

Nasūh ibn `Alī al-Ṣalaḥī al-Maṭrāqī (d. 1583); mathematician, worked in Istanbul.
See: GAL² (II 1024), KZ (IV 258), MAMS (II 562), OM (III 305), OMLT (68-73), STMI (413).
M1. Beauty of Reckoners in the Perfectness of Arithmetic (Jamāl al-ḥussāb fī kamāl al-ḥisāb) T - Istanbul (Millet, Ali Emiri 363). The complete list is given in OMLT. Treatise is dedicated to Ottoman Sultan Selim II (1566-1574).
M2. Support of Arithmetic in Proposition of All Magnitudes (`Umdat al-ḥisāb fī furuḍ al-maqdira bi'l-kulliyyāt) - Cambridge (1274), Istanbul (SM 846). The complete list is given in OMLT. Turkish version: Istanbul (NO 2984). Descriptions: in KZ and OM.
Treatise in 20 chapters: 1) siyaqid figures, 2) Indian figures, 3) addition of integers, 4) fractions, 5-6) duplication and mediation, 7-8) application of fractions in craft and trade, 9-11) multiplication and division of integers and fractions, 12-15) measures of length, volume, and weight, 16) drawings, 17) proportions, 18) taxes, 19) rule of "two errors", 20) addition of fractions.

1002. AHMAD AL-SUNBATI

Shihāb al-Dīn Aḥmad ibn Aḥmad ibn `Abd al-Ḥaqq al-Sunbāṭī al-Miṣrī al-Shāfi`ī (d. 1589), scholar-encyclopaedist, astronomer.
See: GAL (II 217, 484), GAL² (II 216, 496, 1019), KZ (III 388), MAA (191), MAA² (180), MAA³ (177), MAMS (II 562), OALT (220-222), SSM (90), STMI (290, 359).
E1. Garden of Intelligents (Rawḍa al-fahūm) - Algiers (672), Gotha (169), London (893/7), Patna (2233). Commentary to the work (No 896, E1) of al-Suyūṭī.
A1. Commentary on Treatise of [Sibṭ] al-Maridīnī on Operations with the Sine Quadrant (Sharḥ al-risāla al-Māridīniyya fī'l-`amal bi'l-rub` al-mujayyab) = Explanation of "Treatise of Fatḥ al-Dīn on Operations with Sine [Quadrants] (Tawḍīḥ `alā'l-risāla al-Fatḥiyya fī'l-a`māl al-jaybiyya) - Treatise on Operations with the Sine Quadrant (Risāla fī `amal [bi']l-rub` al-mujayyab) - Alexandria (ḥisāb 69), Algiers (1462), Baku (B 2120/4, 4118/2, 5852, 6070), Berlin (5821), Cairo (mīqāt 99, 532/1, 587, 1963/2, Fāḍil mīqāt 37, 169/2), Cambridge (Sup. 663), Hyderabad (majlis 16/1), London (407/2), Rabat (452/6), Tripoli (T 25/2; Um. 1192/3), Tunis (64/3), Vienna (359/3, 1420/2). Commentary on the treatise (No 873, A7) of Sibṭ al-Maridīnī.
A2. Explanation of Timekeeping (Tawḍīḥ al-mīqāt) - Mahachqala (218/8).

A3. On Timekeeping (Fi'l-miqat) - Mahachqala (185/2, 187/2).

A4. Explanation of Mysteries on Solving [Difficulties] in a Treatise on Astronomy (Izhār al-asrār fi ḥall risāla fi hay'a) - Hyderabad (riyāḍa. 10, 186). Treatise in 19 chapters plus introduction.

1003. MIRZAJAN AL-SHIRAZI

Ḥabiballāh Mīrzājān al-Sayyid al-Shīrāzī al-Baghandī (al-Baghnawī) (d. 1586) known as "Mulla-yi naw" (new scholar), from Shiraz, philosopher, pupil of Kamāl al-Dīn Maḥmūd al-Shīrāzī (No 668) who was the pupil of al-Dawwānī (No 894); he worked in Shiraz and Bukhara.

See: GAL² (II 594), KZ (I 298, 303, 467, II 202, 405, 408, III 103, 360, V 596, VI 172, 241), MAMS (II 563), STMI (494).

E1. Commentary on "Wisdom of Source" (Sharḥ Ḥikma al-`ayn) - Aligarh (Azad. Radi al-Dīn 35), Cairo (VI 92), Cambridge (Sup. 411), Istanbul (SM Damat 89, Yeni Cami 762), London (Sup. 727), Mashhad (121; Gauharshad 309/1, 824, 1113/3), Paris (2385/2), St. Petersburg (A 764, 1077, B 928, 1302, 3501, 3534-3535, 3649, C 1204, 1302, 2282). Commentary on the work (No 616, E1) of al-Kātibī al-Qazwīnī.

E2. Specimen of Sciences (Unmūdhaj al-funūn) - is mentioned in KZ (I 467).

PH1. Super-commentary on Commentary on "Indications" (Ḥāshiya dar Sharḥ Ishārāt) - Aligarh (Azad. Subh. 110/54), Hyderabad (Salar falsafa 14). Super-commentary on the commentary (No 606, PH3) by al-Ṭūsī on the work (No 317, PH4) of Ibn Sina.

1004. TAQIY AL-DIN AL-SHA`M AL RASID (TAKİYUDDİN AL-RAŞİD)

Taqiy al-Dīn Abū Bakr Muḥammad ibn Qāḍī Ma`rūf ibn Aḥmad al-Sha`mī al-Asadī al-Rāṣid (1526-1585), (rāṣid = observer), Ottoman astronomer from Damascus, worked at Nablus, Palestine, and Istanbul. He founded the first observatory in Istanbul during the reign of Ottoman Sultan Murad III (1574-1595) which housed a library mainly comprising books on astronomy and mathematics. Takīyuddīn invented new instruments that were added to the array of those already in use for observation purposes in the Islamic world. Following were among the instruments he used: 1) an armillary sphere known to be invented by Ptolemy; 2) a mural quadrant; 3) an azimuthal quadrant 4) a parallel ruler; 5) a ruler-quadrant or wooden quadrant; 6) an instrument with two holes for the measurement of apparent diameters and eclipses; 7) an instrument with chords to determine the equinoxes, invented by Takīyuddīn to replace the equinoctial armillary, 8) a mushabbaha bi'l-manātiq, another of his inventions, the nature and function of which is not clearly explained; 9) a mechanical clock with a train of cogwheels 10) a *sunaydi* ruler, apparently a special type of instrument of an auxiliary nature, the function of which was explained by 'Alāuddīn al-Mansūr. Takīyuddīn used a mechanical clock of his own make as well as a wooden wall dial that he set up in the observatory. He described the clock as: "we built a mechanical clock with a dial showing the hours, minutes and seconds and we divided every minute into five seconds." This was a more precise clock than those previously used and considered to be one of the significant inventions in the field of applied astronomy developed during the 16th c. Takīyuddīn integrated Damascus and Samarkand traditions of astronomy. His first task at the observatory was to correct the "Astronomical Tables of Ulugh Beg". He also conducted various observations on the eclipses of the sun and the moon. The comet, which was viewed in the skies of Istanbul for one month during September 1578, was observed ceaselessly day and night and results of the observations were presented to the sultan. As a result of the new methods he developed and equipment he invented, Takīyuddīn was able to approach his observations in an innovative way and produce new solutions to astronomical problems. He also substituted the use of a decimally based system for a hexadecimal one and prepared trigonometric tables based on decimal fractions. He determined the ecliptic degree as 23° 28' 40", which is very close to the current value of 23° 27'. He used a new method in calculating solar parameters as well as determining the magnitude of the annual movement of the sun's apogee as 63 seconds. Considering that today's known value is 61 seconds, the method he used appears to have been more precise than that of Copernicus (24 seconds) and Tycho Brahe (45 seconds).

See: GAL² (II 484), KZ (I 390, 394, II 59, 70, 208, 288, III 197, 226, 376, 381, 401, 411, 524, 587, IV 159, V 261, 388), MAA (191-192), MAA² (180), MAMS (II 563-565), OALT (199-217), OMLT (83-87), SSM (171-172), STMI (325), TIFI (315-317); Dizer [3], al-Hasan [3, 6], Mordtmann [1], Sayılı [18] (289-304), Tekeli [4], [18] (ENWC), Ünver [5a].

M1. Book on Coinciding Ratios in Algebra and Almucabala (Kitāb al-nisab al-muta-shakkala fi'l-jabr wa'l-muqābala) - Cairo (mīqāt 557/3, Taymūr riyāḍa. 140/10), Oxford (I 881/3).

M2. Aim of Pupils in the Science of Arithmetic (Bughyat al-ṭullāb fi `ilm al-ḥisāb) - Cairo (riyāḍa. 1023), Rome (Vat. Sbath 496/2), is quoted in KZ (II 59). The complete list is given in OMLT

Treatise in 3 parts: 1) on arithmmetic with decimal figures, 2) on arithmetic with sexagesimal figures, 3) on algebra.

M3. Book on Projecting Spheres onto a Plane (Kitāb tasṭīḥ al-ukar) = Prefered Rule in Foundations of Projecting on a Plane (Dastūr al-tarjīḥ fī qawā`id al-tasṭīḥ) - Cairo (Ṭal`at mīqāt 135 - anonymous), Istanbul (Kandilli 415/5) under the first title, is mentioned in KZ (II 288, III 226) under the second title. Treatise on stereographic projection; could be part of an astronomical work.

M4. Commentary on "Treatise on Classification in Arithmetic" (Sharḥ risālat al-Tajnīs fi'l-ḥisāb) - is mentioned in KZ (II 208, III 376). Commentary on the treatise (No 527, M2) of al-Sajawandī.

M5. Exposition of "Book on Spheres" of Theodosius (Taḥrīr Kitāb al-ukar li-Thawudhūsiyūs) - is mentioned in KZ (I 390).

A1. Fragrance of Spirit on Drawing of Horary [Lines] on Plane Surfaces (Rayḥānat al-rūḥ fī rasm al-sā`āt `alā mustawī al-suṭūḥ) - Bursa (Haraççıoğlu 1168/2), Cairo (falak 3988, mīqāt 1140, Fāḍil mīqāt 126, 128, 233, Talat mīqāt 182), Istanbul (SM Esat 3500, 2033, 2055; Kandilli 132/3, 58, 51; BU Veliyuddin 2305/1; Topkapı Hazine 467/1), Madina (Arif Hikmet 493/2), Oxford (I 881/1, 927), Rome (Vat. 1224), is quoted in KZ (III 524). In addition to those stated above, 5 manuscript copies are mentioned in OALT.

A2. Non-perforated Pearls and Roll of Reflections (Kharīdat al-durar wa jarīdat al-fikar) - Berlin (5699), Cairo (mīqāt 900/2, Ṭal`at mīqāt 76), Istanbul (Kandilli 183, 184; Topkapı Emanet Hazinesi 1711; SM Esad Efendi 1976/2), Tehran (Meclis-i Sena 7572/25). Description of the Berlin manuscript: Ahlwardt [1] (174-175). Small zīj for Cairo written in 1581/1582 for Sa`d al-Dīn Efendi, contains sine and tangent tables in decimal fractions.

A3. Book of Ripe Fruits from Clusters of Universal Instrument (Kitāb al-thimār al-yāni`a `an quṭūf al-āla al-jāmi`a) - Cairo (mīqāt 557/2), Manchester (361/E), Oxford (I 881/2). Revision of the work (No 750, A20) of Ibn al-Shāṭir.

A4. Poem on Sine [Quadrant] (Manẓūmat al-mujayyab) = Treatise on Operations with the Transparant Quadrant (Risāla fi'l-`amal bi rub` al-dastūr) - Berlin (5834), Cairo (Fāḍil mīqāt 138), Istanbul (SM Hüsnü 135/2), all under the first title. Description of the Berlin manuscript: Ahlwardt [1] (250-251).

A5. Lotus of Culmination of Thoughts in the Kingdom of Rotating Spheres (Sidrat muntahā al-afkār fī malakūt al-falak al-dawwār) - Istanbul (Kandilli 56, 208/1, NO 2930; Topkapı Hazine 465/1; BU Veliyuddin 2308/2), Rome (Vat. Sbath 496/1) - is quoted in KZ (I 394, III 466, 587). Edition of Chapter III (on astronomical instruments): Tekeli [1] (228-238). Turkish translation of the same chapter: Tekeli [1] (214-227). German translation of the quotation on Zīj of Ibn Shatir (No 750) in KZ: Wiedemann [90] (325).

Research: Tekeli [1] (on astronomical instruments), [3, 5] (on determining Solar equation), [6] (on determining chord of 2^{o} and sin 1^{o}), [7] (on resolving the problem of the duplication of cube). [9].

A6. Book on Knowledge of Position of Horary [lines] (Kitāb fī ma`rifat waḍ` al-sā`āt) - Cairo (VI 154) - is mentioned in KZ. Treatise in 10 chapters.

A7. [Commentary on His Poem on Conversion of Dates in Different Calendars] - Cairo (Fāḍil majlis 180/7), Istanbul (SM Laleli, 3642/1, Lala İsmail 732/6, Hasan Hüsnü 1135/6; BU Veliyuddin, 2305/6; Topkapı Hazine 467/2).

A8. Knowledge on Reckoning of Lunar Stations (Fī ma`rifat ḥisāb manāzil al-qamar) - Beirut (Safa 22).

A9. [Revision of "Almagest"] - is mentioned in KZ (V 388).

A10. [Revision of Zīj of Ulugh Beg] - is mentioned in KZ (III 197, 490). Revision of the work (No 816, A1), Ulugh Beg.

A11. Treatise on the Azimuth of Qibla (Risālat samt al-Qibla) - is mentioned in KZ (III 411).

A12. Pearl of Ordered Simplification of the Calendar (al-Durra al-naẓīm fī tashīl al-taqwīm) - is mentioned in KZ (III 197).

A13. Uses on Determining the Equator of the Globe and Knowledge of the Sine (Fawā'id fī istikhrāj minṭaqat al-kura wa ma`rifa al-jayb) - Cairo (Taymūr riyāḍa 10/13).

A14. Simplification of Legal Shahinshah Zīj (Tashīl Zīj al-shar`iyya al-shāhinshāhiyya) - Patna (2466).

A15. Daqā'iq İkhtilāf al-Ufuqayn. - Cairo (Talat mīqāt 211/1)

A16. al-Kawākib al-Durriyya fī Waḍ` al-Bankāmāt al-Dawriyya. - Cairo (mīqāt 557/1, ṣinā`a 166/1), Oxford (557), Paris (2478)

A17. al-Mizwalat al-Shimāliyya bi Faḍli Dā'iri Ufqi Qusṭantiniyya. - Bodleian-March (119), Istanbul (Kandilli 547).

A18. Risāla fī `Amal āla Yursamu bihā al-Kawākib `alā Saṭḥin Mustawin. - Istanbul (SM Yeni Cami 797/3).

A19. Risāla fī al-`Amal bi al-Rub` al-Shakāzī. - Cairo (Taymūr riyāḍa 169/2, Fihris al-azhariyya VI 303), Edirne (Selimiye 691/3), Garrett (4792), Istanbul (Topkapı III. Ahmed 3119/4), Manchester (361/5).

A20. Risāla fi'l-İkhtilāf bayna al-Muwaqqitīn bi Mahrusat al-Qāhira fī ḍabt Qawsay al-Nahār va al-Layl va Dā'irat al-Fajr wa'l-Shafaq. - Istanbul (Kandilli 208/5, 176), Tehran (Meclis-i Sena 7572/38).

A21. Risāla fī samt al-Qibla.

A22. Risāla fī Ma`rifat al-Ufuq al-Ḥadīth. - Istanbul (Kandilli 208/6).

A23. Risāla fī Sabab ta'akhkhur Ghurūb al-Shams. -Istanbul (Kandilli 147, 140/3).

A24. Risāla fī Awqāt al-`Ibādāt. -Istanbul (Kandilli 208/4).

A25. Tafsīr Ba`ḍ al-ālāt al-Raṣadiyya. - Istanbul (Kandilli 208/2).

A26. Urjūza li'l-Jayb wa'l-ḍarb wa'l-Qisma. - Istanbul (Üsküdar Selim Ağa 732m/7; SM Hüseyin Çelebi 748/7, Esad Efendi 3769/10).

A27. Prefered Rule in Foundations of Projecting on a Plane (Dastūr al-tarjīh fī qawā`id al-tasṭīh/ al-Dustūr al-rājiḥ li Qawā'id al-Tasṭīh) - is mentioned in KZ (II 288, III 226), Cairo (Ṭal`at mīqāt 135 - anonymous), Giresun (155/2), Istanbul (Kandilli 415/5, 208/3, Arkeoloji Müzesi 601).

Ph1. Book on Light of Pupil of the Eye and on Colours of Garden of Sight (Kitāb nūr ḥadīqat al-abṣār wa nawr ḥadīqat al-anẓār) - Cairo (riyāḍa. 893), Istanbul (Kandilli 122), Oxford (I 930), Tashkent (446/1). Description of the Tashkent manuscript: SVR (XI 115). Research: Wiedemann [23] (401), Winter [7] (87). Treatise on optics containing introduction on the Sun, the Eye, and the Brain, in 3 parts: 1) direct vision, 2) refraction, 3) refraction. It is dedicated to Ottoman Sultan Murad III (1574-1595).

Ph2. [Treatise on the Effect of Refraction at the Horizon and of Differences of Opinions of Cairo Timekeepers Thereon] - Cairo (Ṭal`at mīqāt 11 - only the first page), Istanbul (Kandilli 415).

Ph3. [Treatise on the Difference between True and Visible Horizons] - Istanbul (Kandilli 122).

Me1. On Science of Clepsydras (Fī `ilm al-binkāmāt) - Oxford (I 968), Paris (2478). Research: Wiedemann [149].

Me2. Pearl Stars on Round Clepsydras (al-Kawākib al-durriyya fi'l-binkāmāt al-dawriyya) - Cairo (mīqāt 557/1, sina`a 166/1) - is mentioned in KZ. Research: Tekeli [8]. Treatise in 2 books on mechanical devices.

Me3. Majestic Methods in Spiritual Devices (al-Ṭuruq al-saniyya fi'l-ālāt al-rūḥāniyya) - Cairo (falak 3845, mīqāt 557/4), Dublin (Beatty 5232), Istanbul (Kandilli). Edition: al-Hasan [3] (76-162). Research: Tekeli [5], al-Hasan [3]. Treatise in 6 chapters: 1) clepsydras, 2) devices for lifting weights, 3) devices for raising water, 4) fountains and continually playing flutes and kettle-drums, 5) irrigation devices, 6) self-moving spit.

1005. NAJM AL-DĪN NUQTA IBN MA`RUF

Najm al-Dīn Nuqṭa ibn Ma`rūf "Najmi" (d. ca 1582.), Ottoman astronomer, born in Damascus, brother of Taqiy al-Dīn (No 1004).

See: OALT (190-191), SSM (172).

A1. Tables for Computing the Visibility of the Crescent (Jadāwil li-ma`rifat ruy'at ahillat al-shuhūr) - Cairo (falak 4038/2), Istanbul (SM Esat 2979/1).

1006. YAHYA AL-RU`AYNI

Sharaf al-Dīn Yaḥyā ibn Muḥammad ibn Muḥammad ibn `Abd al-Raḥmān al-Khaṭṭāb al-Ru`aynī al-Maghribī al-Makkī al-Mālikī (d. 1587), Ottoman mathematician and astronomer, lived in Mecca, son of al-Ru`aynī al-Malikī (No 964).

See: GAL (II 515-516), GAL² (II 537), MAA² (474), MAA³ (179). MAMS (II 565-566, 571), OALT (233-237), OMLT (98-99), SSM (87-88), STMI (360).

M1. Abridgement of the Science of Arithmetic (Mukhtaṣar fī `ilm al-ḥisāb) = Abridgement of "Delight" (Mukhtaṣar al-Nuzha) = Introduction to Arithmetic (Muqaddimat al-ḥisāb) - Berlin (5983), Cairo (falak 17276/1, Taymūr riyāḍa 152), Princeton (Yehuda 222), Rampur (I 418/68). The complete list is given in OMLT. Abridgement of the work (No 783, M6) of Ibn al-Hā'im.

A1. Abridgement of "Thread of Two Pearls on Resolution [of Problems] of the Sun and Moon" (Mukhtaṣar Silk al-durrayn fī ḥall al-nayyirayn) - Cairo (mīqāt 148, 167/1), Leiden (2811), Rampur (I 422/20). Abridgement of the work (No 955, A1) of al-Ghaffār al-Malikī

A2. Means for Pupils for the Knowledge of Operations [of Timekeeping] in Night and Day by Reckoning (Wasīlat al-ṭullāb li ma`rifat a`māl al-layl wa'l-nahār bi ṭarīq al-ḥisāb) - Baku (B 2791/5), Berlin (5700, oct.

434), Cairo (falak 4315/1, 17237, mīqāt 609/1, Fāḍil mīqāt 243), Jakarta (615), Leiden (2805, 2810, 7801/6), Princeton (Yehuda 222), Rabat (449/9), Rome (Vat. 1182/7), Tarim (al-Rabat 272). Description of the first Berlin manuscript: Ahlwardt [1] (175). Abridgement of treatise (No 964, A1) of his father, al-Ru`aynī al-Malikī, in 7 chapters.

A3. Concise Introduction to the Knowledge of Determining Operations [of Timekeeping] by Night and Day with [the Quadrant of Circle Called] the Sine Quadrant (Muqaddima mukhtaṣara fī ma`rifat a`māl al-layl wa'l-nahar [min rub` al-dā'ira al-musammāt] bi'l-rub` al-mujayyab) - Adana (197/2), Amasya (1158/12), Ankara (Milli Kütüphane A. 4785/5, A. 4956/4), Baghdad (Al-Mathaf al-`Irāqī 7905/4), Cairo (mīqāt 599, Fāḍil mīqāt 217, Khalīl mīqāt 10/4), Istanbul (Üsküdar Selim Ağa 732; SM Laleli 3043/14, Atıf Efendi 1694/2, Hüseyin Çelebi 748/3) , Konya (Yusuf Ağa 401/4). In addition to those stated above, 29 manuscript copies are mentioned in OALT.

A4. Treatise on Determining [the Time] at Night and Day by a Quadrant Called the Sine Quadrant (Risāla fī istikhrāj al-layl wa'l-nahār min rub` al-dā'ira al-musammāt bi'l-rub` al-mujayyab) - Alexandria (ḥisāb 56/2), Berlin (5826), Cairo (Fāḍil mīqāt 217), Tehran (642/2), Vienna (327). The commantary of this book: "Mukhtasar fi al-`Amal bi'l-Rub' al-Mujayyab" (OALT 1) - Baghdad (Al-Mathaf al-`Irāqī 1053/1, 3847/4, 18642), Istanbul (SM Mihrişah Sultan 327/7). Revision of the treatise (No 873, A32) of Sibṭ al-Maridīnī.

A5. Treatise on the Sine Quadrant (Risāla fī'l-rub` al-mujayyab) - Baku (B 389/4-5, 396/3, 1996/5, 2315/8, 2837/7, 2875/5, 4147/4, 5852/1), Cairo (mīqāt 1117), Hyderabad (Said. hay'a 22), Kazan (1878/2).

A6. Treatise on the Position of the Sun (Risālat al-manzila allatī fīhā al-shams) - Aleppo (IHAS Antak. 182).

A7. Treatise on Determining the Four Directions by the Sine Quadrant (Risāla fī istikhrāj al-jihāt al-arba` bi'l-rub` al-mujayyab) - Princeton (Yehuda 4003).

A8. Risala fi Ahkam al-Nujum- Paris (6225).

A9. Risala fi Istikhraj Awqāt al-Ṣalāt wa Shay' min al-Tawārīkh wa al-A`māl al-Falakiya min Ghayri al-ālāt - Cairo (mīqāt 464, 77, Taymūr riyāḍa 107, Talat mīqāt 145).

1007. SHAMS AL-DIN AL-HUNAYD

Shams al-Dīn Muḥammad al-Hunayd (16th c.), astronomer.

See: MAMS (III 45), SSM (91-92).

A1. [Planetary Tables] - Cairo (Ṭal`at mīqāt 113/1).

A2. Treatise on Degree (Risālat al-daraja) - Paris (2360/3). Treatise on correspondence on Solar and Lunar years.

1008. `ABD AL-RAHMAN AL-TARABULUSI AL-TAJURI

Abū Zayd `Abd al-Raḥmān ibn Muḥammad (`Abdallāh) ibn Aḥmad al-Tarābulusī al-Tājūrī (d. 1552), from Tripoli, Libya; Ottoman mathematician and astronomer.

See: GAL (II 212, 469), GAL² (II 485), MAA (200-201), MAMS (II 566-567), OALT (130-135), SSM (86), STMI (277).

A1. Commentary on Treatise of Fath al-Dīn (Sharḥ al-risāla al-Fatḥiyya) = Commentary on the Treatise of al-Maridīnī on Operations with Sine Quadrant (Sharḥ al-risāla al-Māridīniyya fī'l-`amal bi'l-rub` al-mujayyab) - Algiers (613/9), Beirut (210), Berlin (5820; IGMN II. 14), Cairo (mīqāt 417, 621, 634, 959, 1097, Fāḍil majlis 17), Escorial (I 926), Fas (Zawiya 90/9b), Hyderabad (Salar hay'a 30/2), Jerusalem (Yehuda 158/8), London (408/3), Rabat (452), Vienna (Acad. 331). Commentary in 20 chapters on the work (No 873, A7) of Sibṭ al-Maridīnī.

A2. Introduction to Concise [Treatise] on the Science of Astronomy by which Four Seasons, Prayers Times, Parts of Night, and Direction of the Qibla are Determined without Instrument (Muqaddima mukhtaṣara yu`rafu minhā al-fuṣūl al-arba`a wa awqāt al-ṣalāt wa ajzā` al-layl wa jihat al-Qibla bi ghayr āla) = Introduction (Muqaddima) = Treatise on Four Seasons, Prayer times, Parts of Night, and Direction of the Qibla are Determined without Instruments (Risāla fī'l-fuṣūl al-arba`a wa awqāt al-ṣalāt wa ajzā` al-layl wa jihat al-Qibla bi ghayr āla) -Berlin (5712), Cairo (mīqāt 164, 176/4, 463, 521/3, 548, Fāḍil majlis 183/8, mīqāt 216/1 - ascribed to al-Qalyubi), Edirne (Selimiye 713/2), Istanbul (SM Şehid Ali 2776/1, 2750/8, 2776/7, 2776/8, Esad Efendi 1178/7, Hamidiye 875/4, Hüsrev Paşa 251/5; NO 2157/5), Jerusalem (Yehuda 211), Oxford (I 971/11), Paris (2560/14, 4580/5), Rome (Vat. 313/1), Tripoli (Um. 1103). Description of the Berlin manuscript: Ahlwardt [1] (182). Treatise in 20 chapters: 1-10) on chronology, 11-20) on astronomy.

A3. Introduction to the Science on Celestial Spheres from which Beginnings of Night and Day Are Determined (Muqaddima fī `ilm al-falak yu`rafu minhā awā'il al-layl wa'l-nahār) - Cairo (Ṭal`at mīqāt 210. Taymūr riyāḍa. 333/1).

A4. Introduction to the Knowledge of Days of Months during Years and Epochs (Muqaddima fī ma`rifat al-ayyām wa'l-shuhūr `alā madd al-sinīn wa'l-duhūr) - Princeton (Yehuda 3059/1).

A5. Treatise on Operations with the Almucantar Quadrant (Risāla fī'l-`amal bi rub` al-muqanṭarāt) - Cairo (mīqāt 174/1, Fāḍil mīqāt 115), Edirne (Selimiye 713/11), Leipzig (812/11), Tripoli (Um. 1151/3). Treatise in 16 chapters.

A6. [Conclusion of Egyptian Scientists on Mihrabs in Maghrib] - Cairo (mīqāt 540). Treatise was written in 1527.

A7. Light of the Pupil of the Eyes (Nūr al-aḥdhāq) - Paris (2560/5). This treatise can be a revision of the treatise (No 847, A3) of al-Qarafī with the same title.

A8. Commentary on the Treatise on Degree (Sharḥ Risālat al-daraja) - Paris (2560/1). Commentary on the work (No 1007, A2) of al-Hunayd.

A9. On the Astrolabe (Fī'l-asṭurlāb) - Jerusalem (Yehuda 158/9).

A10. Collection of Treatises (Majmū`a rasā'il) - Jerusalem (Khalidi 15).

A11. As'ila wa Ajwiba 'an Jihāt al-Qibla - Madina (Arif ḥikmat majlis 233/15)

A12. Ma`rifat al-Awqāt wa al-Qibla bi Ghayr āla - Manisa (2967/7).

A13. `Umdat al-Hudhdhāq fī'l-`Amal bihā fī Sā'ir al-Awqāt - Paris (2560)

A14. al-Tūtiyya al-Kubrā - Edirne (Selimiye 713/1), Garrett (4992)

Ph1. Treatise on the Knowledge of "House of the Needle" in Respect to Four Directions (Risāla fī ma`rifat waḍ` bayt al-ibra `alā'l-jihāt al-arba`) = House of Needle (Bayt al-`ibra) - Cairo (falak 3989, mīqāt 628/2, 779/2, Fāḍil mīqāt 181/4, Taymūr riyāḍa 141/7), Manchester (361/0), Paris (2560/10), Rabat (449/9, 2522), Tehran (98/3), Tunis (Nat. 18020). Treatise on magnetic compass.

1009. MUHAMMAD SIPAHI-ZADE BURSAWI (SİPAHİ-ZADE)

Muḥammad ibn `Alī Sipāhī-zāda Bursawī (d. 1587), from Bursa, Turkish scholar-encyclopaedist.

See: GAL (II 453), GAL[2] (II 673), KZ (I 466-467, II 198, 395, III 425), MAMS (II 567-568), OM (III 65-66), OCLT (64-68).

E1. Specimen of Sciences (Unmūdhaj al-`ulūm) - Istanbul (SM AS 390, Esmi khan 363), Philadelphia (1372), Vienna (19),

G1. The Most Clear Way for Knowledge of Countries and States (Awḍaḥ al-masālik ilā ma`rifat al-buldān wa'l-mamālik) - Cairo (V 16), Cambridge (Sup. 198/5), Istanbul (NO 4693), St. Petersburg (B 1031). Turkish translations: Istanbul (SM Halet 607, Yeni Cami 787). Revision of the work (No 680, G1) of Abū'l-Fida.

1010. MAZHAR AL-DIN AL-QARI

Maẓhar al-Dīn Muḥammad al-Qari` ibn Bahā al-Dīn `Alī (16th c.), astronomer and scholar of Qur'anic studies.

See: MAMS (II 568), PL (I 1227, 1555, 1614, II 71, 85), PL[2] (262).

A1. Commentary on Zīj of Great Amir Ulugh Beg (Sharḥ-i Zīj-i amīr-i kabīr Ulugh Bęg) P - Calcutta (1486). Commentary on zīj (No 816, A1) of Ulugh Beg.

A2. Friend of Astrologers (Anīs al-munajjimīn) - Mashhad (Mawlawi 478/1), Tehran (Malik 3205, 3220/2).

A3. Instruction for Knowledge of Determining the Ephemerides (al-Tafhīm dar ma`rifat-i istikhrāj-i taqwīm) P - Tehran (2133).

A4. Small Zīj of Maẓhar (Zīj-i ṣaghīr-i Maẓharī) P - Tehran (Nafisi).

A5. Treatise on Solar and Lunar Eclipses (Risāla dar kusūf u khusūf) P - Mashhad (Mawlawi 478/3).

A6. Discovery of Meaning (Kashf al-ma`ānī) - Mashhad (Mawlawi 478/2).

1011. `ABDALLAH AL-SHINSHAWRI

Bahā al-Dīn `Abdallāh ibn Muḥammad al-Shinshawrī al-Faraḍī (d. 1591), mathematician, worked in Cairo; he is thought to be the son of Muḥammad Ibn `Abdallāh ibn al-Shinshawrī (No 999).

See: MAA (192), MAMS (II 568-569), OMLT (88-95), SSM (86), STMI (383).

M1. Aim of Desire on Commenting on the "Right Direction of the Pupil" (Bughyat al-rāghib fī sharḥ Murshida al-ṭālib) - Berlin (5996 - extract made by his son), Cairo (falak 4302-4303, mīqāt 12-13, 318, Fāḍil riyāḍa. 5), Gotha (1478), Princeton (Yehuda 373). The complete list is given in OMLT. Description of the Gotha manuscript: Pertsch [3] (107-108). Commentary on the work (No 783, M4) of Ibn al-Hā'im.

M2. Pupil of the Eye on Measurement of Capacity of Two Vessels (Qurra al-`ayn fī misāḥat ẓarf al-qullatayn) - Berlin (5951-5952), Gotha (1078/1, 1079), Philadelphia (1491). The complete list is given in OMLT.

M3. Concise Commentary on Abridgement of [Treatise] Entitled "Gift to Friends on the Science of Arithmetic" (Sharḥ mukhtaṣar al-mukhtaṣar al-musammā Tuḥfat al-aḥbāb fī `ilm al-ḥisāb) - Cairo (falak 3944, 9658, majlis 33/4, 861/3, riyāḍa. 353, 661, Fāḍil riyāḍa. 6, Taymūr riyāḍa. 3), Hyderabad (jadid 3289, riyāḍa. 7, 11), Tripoli (Um. 1099). The complete list is given in OMLT. Commentary on the work (No 873, M12) of Sibṭ al-Maridīnī.

1012. SHAMS AL-DIN AL-MANUFI

Shams al-Dīn Muḥammad al-Manūfī (16th c.), Egyptian astronomer, worked in Cairo.

See: OALT (187-188), SSM (88).

A1. Name of the Most Important in Description of Time (`Unwān al-muhimmāt fī taḥrīr al-awqāt) - Cairo (mīqāt 107/1, 109/1, 177/2, 461, 467, 470, Fāḍil mīqāt 235/1), Çorum (2980), Madina (`ārif Ḥikmat majlis 128/5). Tables for determining prayer times for the latitude 30° of Cairo.

A2. Threading Jewels and Sapphires in Exposition of Operations of Timekeeping (Naẓm al-jawāhir wa'l-yawāqīt fī taḥrīr a`māl al-mawāqīt) - Cairo (mīqāt 547, Fāḍil mīqāt 235/1). Treatise in 5 chapters, written in 1573.

1013. IBRAHIM AL-ASHRAFI

Ibrāhīm ibn Qāytbāy al-Ashrafī al-Ḥanafī (17th c.), Egyptian astronomer of Circassian origin; pupil of Yūsuf ibn Kāmal al-Bursawī (No 991), he could be a descendant of al-Ashraf Qāytbāy (1468-1496), the Mamluk Sultan of Egypt.

See: OALT (264-265), SSM (88-89).

A1. [Tables for Timekeeping] - Cairo (mīqāt 33-34, 152/1-2, 153/1, 682, 740/2).

1014. `ABD AL-MUN`IM AL-`AMILI

`Abd al-Mun`im al-`Āmilī (16th c.), astronomer, worked in Isfahan under Safawid Shah Tahmasp I (1524-1576).

See: MAA (192), MAMS (II 569), PL (II 85), STMI (276); Pingree [30] (EIr), Sayılı [18] (288-289).

A1. Treatise on Observatory Instruments (Risāla dar ālāt-i rasādiyya) P - London (458/2, Sup. 7702).

Treatise on astronomical instruments used by Ptolemy, al-Ṭūsī (No 606) and Ulugh Beg (No 816). It was written in 1563.

1015. YAHYA AL-AMRITI AL-AZHARI

Sharaf al-Dīn Yaḥyā al-`Amrīṭī al-Azharī al-Anṣārī (16th c.), poet and mathematician.

See: MAMS (II 569).

M1. Poem on Arithmetic (al-Manẓūma fī'l-ḥisāb) - Calcutta (1464).

Poetic exposition of the work (No 783, M5) of Ibn al-Hā'im.

Me1. Poem on Lever Balance (Manẓūma fī'l-qabbān) - Cairo (Fāḍil riyad. 28/1, 30/9).

1016. `ABD AL-LATIF IBN AL-KAYYAL

`Abd al-Laṭīf ibn Ibrāhīm ibn al-Qāsim al-Dimashqī (d. 1543) known by the name "Ibn al-Kayyāl" (son of a grain measurer) from Damascus, astronomer.

See: GAL (II 469), MAA (192), MAMS (II 569), OALT (127), SSM (108).

A1. Astronomical Tables (al-Jadāwil al-falakiyya) - Berlin (5758-5761), Istanbul (SM Esad Efendi 1990), London (1162/7). Description of the Berlin manuscripts: Ahlwardt [1] (211-212). Calendar tables based on works (No 750, A3) of Ibn al-Shāṭir and (No 903, A3) of al-Tizīnī.

A2. [Introduction to the Prayer tables of al-Khalīlī and Star Catalogue for 1689] - Cairo (Ṭal`at mīqāt 218). Introduction to the work (No 797, A5).

A3. Muriḥ al-'Anī fī al-`Amal bi al-Zīj al-Khāqānī - Chester Beatty (4677).

1017. SHAMS AL-DIN AL-URMAYUNI

Shams al-Dīn `Abu Abdallāh Muḥammad ibn Muḥammad Abī'l-Khayr `Amūsh al-Ḥusaynī al-Ṭaḥḥān al-Urmayūnī (or Armayūnī) al-Mālikī (16-17th c.), Ottoman astronomer.

See: GAL (II 469), GAL²(II 485), MAA (200), MAMS (II 570), OALT (255-262), OMLT (109-111), SSM (89-90), STMI (355).

M1. Commentary on "Delight" of Ibn al-Hā'im (Sharḥ al-Nuzha li Ibn al-Hā'im) Cairo (riyad. 82). The complete list is given in OMLT. Commentary on the work (No 783, M7) of Ibn al-Hā'im.

A1. Rising Stars on Mentioning Certain Ingenious Tricks Necessary in the Science of Timekeeping (al-Nujum al-shāriqāt fī dhikr ba`ḍ al-ṣanā'i` al-muḥtāj ilayhā fī `ilm al-mīqāt) - Beirut (251), Cairo (majlis 208/1, ṣinā`a 173, ṭabī`iyyāt 149, ṭibb 5129, `ulūm 38, Ḥalīm mīqāt 6, Ṭal`at majlis 791/2, Taymūr ṣinā`a 1, Zaki 918/3). Cambridge (922), Gotha (1413), Istanbul (NO 3636/1; TK Revan Köşkü 2033/12; Millet, Ali Emiri Arabi 2836/3), Mosul (62/1), Paris (6687). Edition: al-Urmayuni [1]. Edition and research: Siggel [1]. Research: Wiedemann [182]. Treatise on materials for making astronomical instruments.

A2. Source Pouring into Knowledge on the Movement of Leading Planets (al-Manhal al-sākib fī ma`rifat taḥrīk al-kawākib) - Cairo (mīqāt 160, 592, 741, 961), Hyderabad (Said. hay'a 37), Princeton (1017). Description of the Princeton manuscript: Hitti, Faris and Abd al-Malik [1] (320).

A3. Quenching Thirst and Hunger in Commenting on the "Removal of the Veil" (al-Rayy wa'l-ishbā` fī sharḥ Kashf al-qinā`) - Berlin (5763 incomplete), Cairo (Fāḍil mīqāt 129, 192/2). Description of the Berlin manuscript: Ahlwardt [1] (213). Commentary on the treatise (No 813, A4) of Ibn al-`Aṭṭār.

A4. Delight of Spirit on Place of Definitions in "Supply of the Traveller" (Nuzhat al-khāṭir fī waḍ` ḥudūd `alā Zād al-musāfir) - Cairo (mīqāt 175/2, 1005), Rampur (I 432/29). Commentary on the work (No 815, A6) of Ibn al-Majdī. Treatise was written in 1585.

A5. Rest of Heart on Enriching of "Supply" (Rāḥat al-fu'ād fī taysīr al-Zād) - Cairo (Fāḍil mīqāt 88, Zaki 917/1), Istanbul (SM Yazma Bağışlar 2062/18), Manisa (1557). Commentary on the work (No 815, A6) of Ibn al-Majdī.

A6. Fragment on Exposition of Lunar Stations, Their Anwa', and Rising of Fixed Stars with Dawn (Qiṭ`a fī taḥrīr al-manāzil al-qamariyya wa anwā'ihā wa ṭulū` al-kawākib al-thābita bi'l-fajr) - Cairo (majlis 323/9).

A7. Brilliant Pearl on Commentary on Glare "Light" (al-Durra al-muḍiyya fī sharḥ al-Lum`a al-bahiyya) - Cairo (falak 4009). Commentary on the work (No 800, A2) of al-Kawm al-Rīshī.

A8. Gift to Lover on Approximate Determining Positions [of Planets], Times, and Qibla (Itḥāf al-ḥabīb (al-muḥib) bi-ma`rifat al-tawqī`āt wa'l-awqāt wa'l-Qibla bi'l-taqrīb) - Cairo (mīqāt 513/2, Ḥalīm mīqāt 12, Taymūr riyāḍa 114, Zaki 154), Jakarta (Sup. 682 - anonymous). Treatise in 7 chapters.

A9. Relief of Sadness in Greater Accuracy in Problems Necessary for Studying the Science of Timekeeping (Kashf al-karubāt fī taḥqīq masā'il yakhtāuj ilayhā ṭālib `ilm al-awqāt (al-mīqāt)- Cairo (mīqāt 511/2, 1108/3).

A10. [Astronomical Tables] - Berlin (5663).

A11. [Answer to a Question about Qibla at Manfalut] - Cairo (mīqāt 1093/9).

A12. [Treatise on the Duration of Morning and Evening Twilight] - Cairo (Fāḍil mīqāt 167/5).

A13. Fragment on the Construction of "Gouged" and on its Setup by Geometry and Reckoning (Qiṭ`a fī `amal al-muqawwar wa naṣbihā bi ṭarīq al-handasa wa'l-ḥisāb) - Cairo (mīqāt 597/1). Treatise on an astronomical instrument.

A14. [Treatise on Terms of Construction of Sundials] - Cairo (Zaki 913/3 - anonymous, but in this manuscript the work A10 is mentioned as a treatise of the same author).

A15. [Tables for Drawing Vertical Sundials for the Latitude 30°] - Cairo (mīqāt 746/2).

A16. Elements of Solid in Determining Distance and Side (al-Uṣūl al-rawāsikh fī ma`rifat al-bu`d wa'l-jiha) - Cairo (Zaki 917/2), Tehran (Senat 7572/26). Treatise on sundials, written in 1569.

A17. Nuzhat al-Afkār fī `Amal al-Layl wa al-Nahār.

A18. Tahrīr al-Manāzil al-Qamariyya wa Anwā'iha wa Ṭulū` al-Kawākib al-Thābita bi al-Fajr. -Cairo (majlis 323/9)

A19. al-Tanqīh fī Taḥrīr fiṣḥ al-masīḥ. -Paris (2569/3)

1018. `ABD AL-QADIR AL-MANUFI

`Abd al-Qādir ibn Muḥammad al-Manūfī al-Shāfi`ī (16th c.), timekeeper at al-Ghuriyya madrasa in Cairo; son of Shams al-Dīn Muḥammad al-Manūfī (No 1012).

See: GAL (II 469), GAL² (II 486), MAA (193-194), MAMS (II 570-571), OALT (217-220), SSM (88).

A1. Removal of Dissensions on Operations with Minutes of Difference (Raf` al-khilāf fī `amal daqā'iq al-ikhtilāf) - Cairo (falak 4048, mīqāt 182/1, Fāḍil mīqāt 123). Treatise on difference between true and visible horizons written in 1572.

A2. Detailed Tables of Transits of Ascensions on Ecliptic (Jadāwil maḥlūl al-maṭāli` al-falakiyya) - Cairo (mīqāt 755/1, Fāḍil mīqāt 45, 48, 66).

A3. Tables of Parallaxis of the Moon (Jadāwil ikhtilāf manẓar al-qamar) - Cairo (mīqāt 13/1).

A4. [Abridgement of "Note on Aid"] - Cairo (mīqāt 577/3). Abridgement of the work (No 888, A23) of al-Ṣūfī al-Miṣrī.

A5. [Tables of Half Diurnal Arc, Time from Noon to Prayer `Aṣr and Duration of Evening Twilight] - Cairo (mīqāt 1100, Fāḍil mīqāt 235/2). Tables for latitude 30° of Cairo.

A6. [Treatise on Shadows, Answer to the Question of Taqiy al-Dīn Ibn Ma`rūf] - Cairo (mīqāt 577/2, 792). Answer to a question of al-Sha'mi (No 1004).

A7. Spreading Jewels and Sapphires in Exposition of Operations of Timekeeping (Naẓm al-jawāhir wa'l-yawāqīt fī taḥrīr a`māl al-mawāqīt) - Cairo (V 326). Treatise was written in 1573.

A8. Name of the Most Important in Exposition of Timekeeping (`Unwān al-muhimmāt fī taḥrīr al-awqāt) - Cairo (V 264).

A9. Jadāwil ikhtilāf al-ṭūl wa al-`arḍ wa'l-ta`dīl `alā ra'y Ulugh Beg. -Istanbul (NO 2929/5).

A10. Jadāwil li ma`rifat daqā'iq ikhtilāf mā bayna ufuqayn. - Istanbul (NO 2929/4).

A11. Jadāwil al-maṭāli` al-falakiyya min awwal al-jady maḥsūba min awwal al-ḥamal ilā ākhir al-jawzā' maḥlūla daqīqa daqīqa `alā thalath marātib. - Cairo (Fāḍil mīqāt 66)

A12. Ḥadaq al-nāẓir fī ikhtilāf al-manāẓir. - Chester Beatty (4067).

A13. Ṣūrat tāli`i wilādat al-Qāḍī Muḥammad al-`Ibādī Sanat 917. - Cairo (Fāḍil mīqāt 141/1)

A14. Taḥrīr al-maqāl fī ma`rifat `amal al-hilāl. - Istanbul (Kandilli 508).

1019. MUHAMMAD FADIL AL-SAMARKANDI

Muḥammad Fāḍil ibn `Alī ibn Muḥammad al-Maskinī al-Qāḍī al-Samarkandī (16th c.), from Samarkand, judge (al-qāḍī), worked in India at the court of Mogul Emperor Humayun (No 971).

See: MAMS (II 571), PL (II 358-359), STMI (607).

E1. Humayun's Jewels of Sciences (Jawāhir al-`ulūm Humāyūnī) P - Aligarh (Azad), Manchester (Lind. 367), Patna (910). Description of the manuscript: `Abd al-Muqtadir [2] (144-150). Work in 3 books: 1) philosophy, 2) zoology, botany, medicine, 3) arithmetic, measurement, Euclid's "Elements", "Intermediate books" (between "Elements" and "Almagest"), astronomy, astrology, music, mechanics, instruments, and mysticism. Research: Ansari [3], Hadi [1].

1020. QAWAM MAS`UD QARAMANI

Qawām Mas`ud ibn Kamāl al-Dīn Qaramānī (16-17th c.), astronomer.

A1. Scientific and Practical Astronomy and Astrology, Guessing Secret Thoughts, and Problems with the Astrolabe (Nujūm-i `ilmī wa `amalī wa aḥkām-i ḍamīr wa masā'il-i asṭurlāb) P - Tehran (Nafisi 574).

1021. MALIK MUHAMMAD ISFAHANI

Malik Muḥammad ibn Sulṭān Ḥusayn Isfahānī (second half of 16th c.), from Isfahan, mathematician.

See: PL (II 11), SSM (160).

M1. Treatise on Algebra and Almucabala and Foundations of Determining Numerical Unknown Quantities (Risāla dar jabr u muqābala u qawā`id-i istikhrāj-i majhūlāt-i `adadiyya) = Algebra and Almucabala (Jabr u muqābala) = Commentary on "Balance of Arithmetic" (Sharḥ-i Mīzān al-ḥisāb) = Speech on Treatise on Algebra and Almucabala of al-Qushji (Takallama risāla al-jabr wa'l-muqābala li'l-Qushjī) P - Cairo (Zaki 91/1 - under the fourth title), Mashhad (64, 171 - under the first title), Najaf (Amir 413/5 - under the third title),

Tehran (Sipahsalar 894 - under the first title), Yerevan (514/1-under the second title). Supplement to the work (No 845, M2) of al-Qushjī.

M2. Branches of the Science on Numbers (Furū`-i `ilm-i `adad) P - Tehran (3634/1).

1022. `ABD AL-RAHMAN AL-MARIDINI

Abū Zayd `Abd al-Raḥman al-Māridīnī (d. 1590), apparently descendant of al-Māridīnī (No 775) or Sibṭ al-Māridīnī (No 873).

See: MAMS (II 572).

A1. Comments on "Treatise of Fatḥ al-Dīn" of Sibṭ al-Māridīnī on the Sine Quadrant (Ḥāshiya `alā'l-Fatḥiyya al-Māridīniyya `alā al-rub` al-jayb) - Rabat (2513).

1023. SHAH FATHALLAH SHIRAZI

Shāh Fatḥallāh Shīrāzī (d. 1589) from Shiraz, astronomer and mechanic, constructor of mechanisms and cannons; pupil of Khwāja Jamāl al-Dīn Maḥmūd, who was the pupil of al-Dawwānī (No 894) and Ghiyāth al-Dīn Manṣūr Shīrāzī (No 963). He taught in Shiraz where al-Dihlawī (No 1092) became his pupil. He later worked in Bijapur and in 1583 was invited to Agra by Mogul Emperor Akbar (1556-1605) and became the Emperor's financial advisor. He authored the "Akbarī" or "Ilahī" calendar (beginning of this era March 20, 1584) and translated al-Zīj (No 816, A1) of Ulugh Beg into Urdu. He died in Kashmir.

See: MAMS (II 572), PL (I 118-119), PL^2 (417); Alvi and Rahman [1].

1024. IRANSHAH AL-NAYSABURI

Īrānshāh ibn `Alī al-Naysābūrī (16th c.), from Nishapur, astronomer and astrologer.

See: SSM (160).

A1. Conjunctions of Iranshah (Qirānāt-i Īrānshāhī) P - Cairo (Ṭal`at mīqāt fārisī 3). Astrological world history based on Jupiter-Saturn conjunctions, stressing the career of Genghis Khān.

1025. QIWAM AL-DIN AL-KHAFRI

Qiwām al-Dīn Ḥusayn ibn Shams al-Dīn Muḥammad al-Khafrī (16th c.), mathematician, son of al-Khafrī al-Kāshī (No 936).

See: MAMS (III 46), PL (II 27), SSM (160).

M1. [Treatise] of Ja`far on Arithmetic (al-Ja`fariyya fī'l-ḥisāb, Ja`fariyya ḥisābiyya) Ja`fariyyat-i ḥisāb) = [Treatise] of Ja`far on [Arithmetic] Problems (al-Ja`fariyya fī'l-masā'il) P - Cairo (Zaki 91/2), Najaf (Hadi 109/5), Yazd (Saryazdi 81/3). Treatise in 5 books.

1026. MUHYI AL-DIN AL-SAKHAWI

Muḥyī al-Dīn Abū'l-Jūd `Abd al-Qādir ibn `Alī al-Sakhāwī (d. ca 1590), mathematician.

See: GAL (II 468), GAL^2 (II 483), IHS (III 1533-1534), KZ (VI 193), MAA (193, 203), MAMS (II 572-573), OMLT (43-46), SSM (91).

M1. Treatise of al-Sakhawi (al-Risāla al-Sakhāwiyya) = Introduction of al-Sakhawi to Arithmetic (al-Muqaddima al-Sakhāwiyya fī'l-ḥisāb) = Concise [Book] on the Science of Arithmetic (Mukhtaṣar fī `ilm al-ḥisāb) - Baghdad (Makiya), Berlin (6000-6001), Cairo (falak 4328, majlis 40/8, 415/2, riyāḍa. 50, 83/1, 288, 313, 346-347, 392/1, 654, Fāḍil majlis 42/1, riyāḍa. 29/1, Ḥalīm riyāḍa. 299, Taymūr riyāḍa. 5, 299), Gotha (1487-1488), Istanbul (SM Laleli 2717), Jakarta (Sup. 608-609), Paris (2463/2), Princeton (I 625, II 1163/11, Yehuda 222), Qazimiya (Mahfuz 45/1). The complete list is given in OMLT. Description of the Berlin manuscripts: Ahlwardt [1] (347-348). Description of the Gotha manuscripts: Pertsch [3] (113-114). Description of the Paris manuscript: Woepcke [12] (109). Treatise in 11 chapters plus introduction, and conclusion. Chapters: 1-4) on arithmetic of integers, 5) on numeric solutions, 6) on proportions, 7-11) on arithmetic of fractions. Conclusion: on determining unknown quantities by proportions.

M2. Book on the Science of Arithmetic (Kitāb fī `ilm al-ḥisāb) - Yerevan (1064).

M3. Concise [Book] on Arithmetic with Alphabetical Figures (Mukhtaṣar fī ḥisāb al-jumal) - Alexandria (hisab 17). The complete list is given in OMLT.

M4. Commentary on "Poem on Finger Reckoning" (Sharḥ urjūza fī ḥisāb al-yad) - Gotha (1495), is quoted in KZ. Commentary on the treatise (No 910, M1) of Ibn al-Maghribī.

1027. AHMAD AL-MUTARRIFI

Abū'l-`Abbās Aḥmad ibn Abī Ḥumayda al-Muṭarrifī (d. 1592), from Marrakesh, pupil of al-Tajūrī (No 1008).
See: GAL² (II 217), MAA³ (179), MAMS (II 573), OALT (239-240), SSM (139).
A1. Silver Hearts on Commenting Expressions in "Garden" (Lubāb al-fiḍḍa fī sharḥ alfāẓ al-Rawḍa) - Algiers (613/2), Cairo (mīqāt 975/1), Rabat (2504). Commentary on the treatise (No 790, A1) of al-Jadarī.
A2. Collection of the Most Important in the Science of Timekeeping (Jāmi` al-muhimmāt fī `ilm al-mīqāt) - Madrid (341/7).
A3. The Highest Aim in Resolution of Difficulties Found in the [Works of] Ibn al-Bannā (al-Maqṣad al-asnā fī ḥall muqfal yassārat Ibn al-Bannā) - Rabat (2523).
A4. Approximate on Properties of the Sine [Quadrant] (al-Muqarrab fī waṣf al-jayb) - Rabat (2524).

1028. MUHAMMAD AL-FAWANISI

Muḥammad ibn `Umar ibn Ṣādiq al-Bakrī al-Fawānisī (or al-Qawānisī) (d. after 1592), astronomer, worked in Egypt. MAA believes that he lived in 16th c.
See: GAL (II 469), GAL² (II 485), KZ (VI 297-298), MAA (193), MAMS (II 329-330), SSM (100).
A1. Result of Reflections on Operations [of Timekeeping] in Day and Night (Natījat al-afkār fī `amal al-layl wa'l-nahār) - Cairo (mīqāt 950), Oxford (I 1032), Paris (2545), is quoted in KZ.
A2. Aim of Pupils on Operations with the Astrolabe (Bughyat al-ṭullāb fī'l-`amal bi'l-asṭurlab) - Paris (4580/4), Tripoli (Um. 1120).

1029. MULLA CHAND

Mullā Chand (16th c.), court astronomer of Mogul Emperor Akbar (1556-1605).
See: STMI (335).
A1. Simplifications (Tashīlāt) P - is mentioned in the al-Zīj (No 1322, A1) by Jay Singh.

1030. HUSAYN QIRLANGHIJ-ZADA (KIRLANGIÇ-ZADE)

Ḥusayn ibn Khalīl Qirlānghij-zāda Rodoschukī (d. 1563), Turkish astronomer.
See: MAMS (II 573-574), OM (III 292), OALT (149-150), SSM (172).
A1. Treatise on the Sine Quadrant (Risālat rub` al-mujayyab) T - - Cairo (Khalīl mīqāt 10/7), Çorum (2984/2), Istanbul (SM Fatih 3442/11, Nasuhi Dergahı 214/2, Reşit 1043), Konya (Koyunoğlu 10982/8).

1031. `ALI IBN GHANIM AL-MAQDISI

Nūr al-Dīn `Alī ibn Muḥammad ibn `Alī ibn Ghānim al-Maqdisī al-Ṭūrī al-Khazrajī (1514-1596), from Jerusalem; worked in Cairo as a madrasa teacher.
See: GAL (II 404-405), GAL² (II 429), MAMS (II 574), OALT (242-243), SSM (90), TIFI (191).
A1. Commentary on the System of "Treatise of Fatḥ al-Dīn" on Operations with the Sine [Quadrant] (Sharḥ li naẓm al-risāla al-Fatḥiyya fī'l-`amal al-jaybiyya) - Tripoli (Um. 1102/2). Commentary on the work (No 873, A7) of Sibṭ al-Maridīnī.
A2. Fragrant Breath (al-Nasama al-nafḥiyya) - Cairo (mīqāt 981, Ṭal`at mīqāt 156). Commentary on the work (No 873, A8) of Sibṭ al-Maridīnī, perhaps coincides with (A1).
A3. [Commentary on "Fragrant Breath"] - Cairo (mīqāt 102, 1098, Ṭal`at mīqāt 242/1). Author's commentary on A2.

1032. IBRAHIM AL-MAGHRIBI AL-ANDALUSI

Ibrāhīm ibn Muḥammad ibn Muḥammad al-Maghribī al-Andalusī (16-17th c.), from Spain, astronomer, pupil of al-Urmayūnī (No 1017).
See: GAL (II 615), MAA (193), MAMS (II 574), OALT (192-194), SSM (90).

A1. Administrative Treatise on the Knowledge of Timekeeping (al-Risāla al-idāriyya fī ma`rifat al-awqat) - Leiden (1001/12).

A2. Rarities of Narrators on Positions of the Sun and the Moon (Gharīb al-nāqilīn fī aḥwāl al-nayyirayn) - Leiden (1001/16).

A3. Treatise on the Science of Astronomy (Risāla fī `ilm al-falak) - Berlin (5717). Description of the manuscript: Ahlwardt [1] (184).

A4. Treatise on Problems of the Science of Timekeeping without Instrument (Risāla fī masā'il `ilm al-waqt bi ghayr āla) - Cairo (Ḥalīm mīqāt 13). Treatise contains 13 chapters.

A5. Risāla fī ta`yīn al-awqāt wa aḥwāl al-azmina wa tawārīkh al-sinīn - Murad Buhari 262.

1033. MAHMUD NAQQASH AL-SHABKAH

Amīn al-Dīn Maḥmūd Abī'l-Ḥasan `Alī ibn Maḥmūd Naqqāsh al-Shabkāh (16th c.), astronomer.

See: STMI (295).

A1. Treatise on Knowledge of the Astrolabe (Risāla fī ma`rifat al-asṭurlāb) - Hyderabad (Salar hay'a 11). Treatise in 45 chapters.

1034. TAYYIB AL- DIHLAWI AL-MUHANDIS

Ṭayyib ibn Ibrāhīm al-Dihlawī al-Muhandis (16-17th c.), from Delhi, Indian mathematician and astronomer, worked under Mogul Emperor Akbar (1556-1605).

See: STMI (368).

A1. Treatise on the Calendar (Risāla dar taqwīm) P - Rampur (1217). Treatise on calendars, dated according to the calendar Ilāhī.

1035. ZILQ AL-HALABI

Muḥammad Ḥakīm Zilq al-Ḥalabī (end of 16th c.), from Aleppo, mathematician.

See: GAL^2 (II 483), MAMS (II 574), OMLT (81), STMI (419).

M1. Treatise on Discussion of Indian [Mathematics] (Risāla fi'l-bakhth al-hindī) - Rome (Vat. Sbath 784). Treatise on geometry written in 1579.

M2. Key of Arithmetic (Miftāḥ al-ḥisāb) - Hyderabad (jadid 270).

1036. `UTHMAN AL-MALIK AL-DIMASHQI

`Uthmān ibn `Alā al-Dīn ibn Yūnis ibn Muḥammad al-Malik al-Dimashqī (16-17th c.), from Damascus, mathematician and mechanician, worked in Cairo.

See: GAL (II 468), MAMS (II 574-575), OMLT (101-103), SSM (99).

M1. Perfect Aid by Best Sections of Pen Arithmetic (al-Is`āf al-atamm bi āḥāsin al-funūn min ḥisāb al-qalam) - Cairo (riyāḍa. 186, 1093, Ṭal`at riyāḍa. 117- incomplete, 140). The complete list is given in OMLT. Treatise on arithmetic in 2 books, written in Cairo in 1594.

Me1. Property of the Time on the Art of Lever Balances (Nukhbat al-zamān fī ṣinā`at al-qabbān) - Cairo (riyāḍa. 562). Treatise was written in 1589.

1037. JAMAL AL-DIN AL-HASHIMI

Jamāl al-Dīn Muḥammad ibn Muḥammad ibn Mu`īn al-Dīn al-Hāshimī (d. 1595), astronomer.

See: GAL (II 470), KZ (I 438), MAMS (II 575).

A1. Solid Hope in Solution [of Problems] of the Calendar (al-Amad al-qawīm fī ḥall al-taqwīm) - Leiden (589), is mentioned in KZ. Treatise on calendar in 2 books plus introduction and conclusion.

1038. YUSUF AL-NABULUSI

Yūsuf ibn Aḥmad ibn Ibrāhīm al-Nābulusī (16-17th c.) from Nablus, Palestine; Ottoman astronomer.

See: GAL (II 469), MAMS (II 575), OALT (222).

A1. Fragrant Musk on Solutions [of Difficulties] of Al-Zīj of Ibn al-Shāṭir (al-Misk al-`ā ṭir fī ḥall Zīj Ibn al-Shāṭir) - Patna (2464). Description of the manuscript: `Abd al-Ḥamīd [1] (54-56). Commentary on al-Zīj (No 750, A3) of Ibn al-Shāṭir written in 1589.

1039. MUHAMMAD AL-`ASHIK CHELEBI (AŞIK ÇELEBİ)

Muḥammad ibn `Umar ibn Bāyazīd al-`Ashik Chelebī (1555-1598), Turkish geographer and astronomer from Trabzon; died in Damascus.

See: AGL (597-601), KZ (VI 138), MAMS (II 575), OALT (152-153); Taeschner [1] (41-45), [2] (EI^2), OCLT (80-83).

AG1. Panorama of Worlds (Manāẓir al-`awālim) - Istanbul (SM Yeni Cami 794), Vienna (1279). Treatise was written in 1598.

L1. Sensation of Poets (Mashā`ir al-shu`arā) = Memoir (Tadhkira). Edition by Meredith-Owens: `A. Chelebi [1].

1040. SULAYMAN AL-`UTHMANI AL-HANAFI

Sulaymān ibn Ḥamza ibn Bakhshīsh al-Rūmī al-`Uthmānī al-Ḥanafī al-Falakī (16-17th c.), Egyptian astronomer (al-falakī).

See: GAL (II 469), GAL^2 (II 484), MAMS (II 576), OALT (194-198), SSM (87), TIFI (181).

A1. Specimen of Modes of Unstringing Pearls in the Knowledge of Hours (Ṭarz al-jurar fī ḥall al-durar fī ma`rifat al-sā`āt) - Cairo (falak 4053, majlis 323/6, mīqāt 791), New Haven (1453). Commentary on the work (No 815, A15) of Ibn al-Majdī.

A2. The Rise of Pleiades and Disappearance of what was struck by the Plague (Ẓuhūr al-Thurayyā wa khafā' mā kāna wabiyya) - Algiers (532/13), Cairo (majlis 48/1, 215/2), Manchester (790/B), Istanbul (SM Şehid Ali 415/2, Bağdadlı Vehbi 2105/3). Treatise was written in 1580. In this treatise Pleiades are connected with the plague which struck Egypt in 1579. Al-`Uthmani was also the author of several astrological treatises.

A3. Jadāwil Muqawwimāt al-Manāzil li Awwal al-Sana 977. -Cairo (mīqāt 711/2).

A4. Jawāb `alā Su'āl min Saghr dimyāt fī Qawl Ibn al-Shāṭir fī Bāb al-Sihām. - Cairo (mīqāt 131/2).

A5. al-Durr al-thamīn fi'l-Ḥukm `alā Tahāwīl al-Sinīn. - Cairo (mīqāt 633, 989, 522/2, 64, 861/6, Huruf Avqaf 85, Taymūr majlis 222/2, Talat majlis 370/2), Istanbul (Kandilli 222/1)

A6. al-Fayḍ al-`Amīm fī Ma`rifat Aḥkām Ṣadr al-Taqwīm. - Aleppo (al-Waqfiyya 918), Cairo (mīqāt 885, 886, Talat mīqāt 232, 180, 212, 175, 221Fāḍil mīqāt 145, Azhar [27] 7602), Çorum (3022), Istanbul (Topkapı Hazine 481; Univ. Ay. 4751; Kandilli 305; SM Izmirli 475), Princeton (223), Tunus (Dar al-Kutub al-Waṭaniyya 4461).

A7. al-Iḥkām fī Uṣūl al-aḥkām li Tahāwīl al-sinīn wa al-Ayyām. - Cairo (Fāḍil mīqāt 1/1, Talat mīqāt 163), Sela Subayhiyya (305/1).

A8. al-Intifā' li Taṣḥīḥ al-Irtifā'. OALT.

Al- `Uthmānī was also the author of several astrological treatises.

1041. HASAN AL-MAKKI

Ḥasan ibn Muḥammad al-Makkī (d. 1605), Ottoman scholar from Mecca; judge and astronomer.

See: MAMS (III 43), OALT (249-250).

A1. Book of Pearl of the Coronation by Arabic Translation of the Reasoning of Al-Zīj (Kitāb durr al-tatwīj bi ta`rīb mu`ammarat al-zīj) – Bursa (Genel 1797/2), Cairo (mīqāt 52, 1199, 643, 89, Kavala mīqāt 1/4,), Istanbul (Kandilli 215/2). Description of the manuscript: Kunitzsch [1] (33). Commentary on al-Zīj (No 816, A1) of Ulugh Beg.

1042. YUSUF AL-MAHALLI

Abū Muḥammad Yūsuf ibn Muḥammad ibn Manṣūr al-Maḥallī al-Masdī (16-17th c.), Ottoman astronomer.

See: MAA (200), MAMS (II 576), OALT (515-517), SSM (106).

A1. Brilliant Sun on Treatise of Fatḥ al-Dīn (al-Shams al-muḍī'a `ala al-risāla al-Fatḥiyya) - Berlin (IGMN II. 9), Cairo (mīqāt 104, 709, Fāḍil mīqāt 140). Commentary on the treatise (No 873, A7) of Sibṭ al-Maridīnī.

A2. On the Construction of Truncated Quadrant (Fī `amal al-rub` al-maqṭū`) - Gotha (1427).

A3. Removal of the Veil around the Pole (Kashf al-qinā` fi'l-quṭb) - Vienna (1573/2).

A4. Commentary on "Rising Stars on Operations with the Almucantar Quadrant" (Sharḥ al-Nujūm al-shāriqāt fi'l-`amal bi rub` al-muqanṭarāt) - Cairo (mīqāt 536), Vienna (1573/1). Commentary on A8.

A5. Threading Pearls on the Solar and Lunar Calendar (Naẓm al-durar fī taqwīm al-shams wa'l-qamar) - Cairo (falak 4041, mīqāt 458).

A6. Table of Determining Arabic and Coptic Dates (Jadwal fī istikhrāj al-ta'rīkh al-`arabī wa'l-qibṭī) - Cairo (mīqāt 127/2).

A7. [Tables of Surplus of Turn for the Sun, the Moon and the Planets] - Cairo (Fāḍil mīqāt 20/2).

A8. Rising Stars on Operations with the Almucantar Quadrant (al-Nujūm al-shāriqāt fi'l-`amal, bi rub` al-muqanṭarāt). Author's commentary on A4.

A9. Majma` al-Baḥrayn fi'l-`Amal bi Taqwīm al-Nayyirayn - Cairo (Azhar 4383/10).

1043. YAHYA NEV`I

Yaḥyā ibn Pīr `Alī ibn Nasūḥ Naw`ī (1533-1599), Turkish historian, philosopher, and encyclopaedist.

See: GOW (76), KZ (II 325, III 319, IV 428, V 266, 423, VI 296, 505), MAMS (II 576), OALT (673); Babinger [2] (EI, EI^2), Karahan [1] (IA), Plessner [5-6].

E1. Results of Sciences and Beauties of Texts (Natā'ij al-funūn wa maḥāsin al-mutūn) T - Berlin (56), Hamburg (292), Istanbul (TK 1459-1463), Jerusalem (Yehuda 766), London (1136, Sup. 7898-7899), Rome (Vat. Rossi 133). Description of the London manuscripts: Rieu [3] (114-115). Exposition of 12 sciences: 1) history, 2) philosophy, 3) astronomy. 4-7) theology and law, 8-10) mystic and sorcery, 11) agriculture, 12) astrology. Dedicated to Ottoman Sultan Murad III (1574-1595).

1044. DAWUD AL-ANTAKI

Dāwūd ibn `Umar al-Antākī al-Ḍarīr (d. 1599) (al-ḍarīr = blind), born in Antakya (Turkey) (ancient Antiochia), worked in Damascus and Cairo, died in Mecca; philosopher and physician.

See: GAL (II 478), GAL^2 (491-492), HMA II 303-307), OALT (243-244), OMLT (105-106), SSM (90), TIFI (312); Adnan [10] (96), Wüstenfeld [1] (275), Zawahry [1].

E1. Rules of Miracles (Dustūr al-`ajā'ib) - Hyderabad (II 922/6), Peshawar (1603), Rampur (I 175-176).

M1. [Concise Treatise on Algebra] - Cairo (Taymūr riyāḍa. 142).

A1. Specimen in the Science on Celestial Spheres (Unmūdhaj fi'l-`ilm al-falak) - Paris (2357/3).

A2. Treatise on the Science of the Predictions of Stars (Risāla fī `ilm aḥkām al-nujūm) - Cairo (Ṭal`at mīqāt 227/6), London (Sup. 9599). Chapter of the medical treatise ME1.

A3. Risālat al-Ajrām al-Samāwiyya - is mentioned in OALT.

A4. Risāla fi al-Hay'a - is mentioned in OALT.

A5. al-Samā` wa'l-`Alam. - is mentioned in OALT.

PH1. Treatise on Matter and Form (Risālat al-hayūlī wa'l-ṣūra) - Istanbul (SM Laleli 3639).

PH2. Treatise on Existence and Destruction (Risālat al-kawn wa'l-fasād) - Istanbul (SM Laleli 3639).

PH3. Treatise on Motions (Risālat al-ḥarakāt) - Istanbul (SM Laleli 3639).

ME1. Memoir for Minds and Collection of Amazement for the Amazed (Tadhkira ūlā'l-albāb wa'l-jāmi` li'l-`ajab al-`ujāb). Edition: al-Antākī [1]. Research: al-Zawahiri [1].

1045. IBRAHIM AL-KAWAKIBI

Ibrāhīm ibn Muḥammad al-Kawākibī (or al-Kibābī) (16-17th c.), Ottoman mathematician.

See: MAMS (III 19), OMLT (106-107).

M1. Support of Pupils in the Science of Arithmetic (`Umdat al-ṭullāb fī `ilm al-ḥisāb) - Istanbul (SM Hamid. 88).

1046. SIRAJ AL-DIN AL-FARISKURI

Sirāj al-Dīn `Umar ibn Muḥammad ibn Abī Bakr al-Miṣrī al-Fāriskūrī al-Shāfi`ī(d. 1610), born in Fāriskūr, Egypt; Ottoman astronomer.

See: GAL (II 419), GAL² (443, 484), KZ (III 524, VI 290), MAA (193), MAA² (180), MAMS (II 577) OALT (254-255), SSM (99).

A1. Victory of Victories by Commentary on "Fragrance of Spirit" (Fatḥ al-futūḥ fī Sharḥ Rayḥānat al-rūḥ) = Breath of Fragrance by Commentary on "Fragrance of Spirit" (Nafḥ al-fuyūḥ fī Sharḥ Rayḥāna al-rūḥ) - Cairo (Fāḍil mīqāt 389), Oxford (I 927), St. Petersburg (B 1639/1), is quoted in KZ (III 524). Commentary on the treatise (No 1004, A1) of al-Sha`mi, was written in 1572.

A2. Fragment on Operations with the Almucantar Quadrant (Nudhba fī'l-`amal bi rub` l-muqanṭarāt) - Princeton (Yehuda 964).

A3. Breath of Fragrances by Commentary on "Fragrance of Spirit" (Nafḥ al-fuyūḥ fī sharḥ Rayḥāna al-rūḥ) - Cairo (Fāḍil mīqāt 239). Commentary on the treatise (No 1004, A1) of al-Sha'mi.

A4. The First Hour of Night (Nāshiyyat al-layl) - is mentioned in KZ (VI 290).

1047. ABU'L-FAZL `ALLAMI

Abū'l-Faḍl `Allāmī (1551-1602), born at Agra, friend and vizier of Mogul Emperor Akbar (1556-1605).

See: MAMS (II 577-578); A. Beveridge [1-2], Blochmann [1], Delambre [1] (224), Nurul Hasan [1] (EI²), Teufel [1].

E1. Establishments of Akbar (ā`īn-i Akbarī) P. Editions: `Allami [2, 4]. English translations: by Gladwin - `Allami [1], by Blochmann and Jarrett - `Allami [3, 5], by Phillot - `Allami [6].
Third part of the "Book on Akbar" (Akbar-nāma), in 5 books: 1) Emperor's Court, 2) The Army, 3) Administration, 4) Sciences, 5) Sayings of Akbar. (1) and (4) contain chapters on various sciences. Partial French translation: Clement-Mullet [1].

1048. YAHYA AL-HALABI

Sharaf al-Dīn Yaḥyā ibn Taqī al-Dīn ibn Ismā`īl ibn `Ibāda al-Ḥalabī (b. 1546) from Aleppo, Syrian mathematician.

See: MAMS (II 578), OMLT (124-128), SSM (101).

M1. Commentary on "Delight of Pupils in the Science of Arithmetic" (Sharḥ Nuzhat al-ṭullāb fī `ilm al-ḥisāb) - Cairo (riyāḍa. 1100; Azhar VI 147), Princeton (Yehuda 244). Short commentary on the work (No 783, M7) of Ibn al-Hā'im.

M2. Great Commentary on "Delight of Pupils in the Science of Arithmetic (al-Sharḥ al-kabīr `alā Nuzhat al-ṭullāb fī `ilm al-ḥisāb) = Ways of Pupils in Commenting on "Delight of Reckoners" (Maslak al-ṭullāb fī sharḥ Nuzhat al-ḥussāb) - Baghdad (2951), Cairo (Azhar VI 155), Princeton (Yehuda 3407). The complete list is given in OMLT. Great commentary on the work (No 783, M7) of Ibn al-Hā'im.

1049. `ABD AL-QASIM AKOVALI-ZADA (AKOVALI-ZADE HATEM)

`Abd al-Qāsim Akovalī-Zāda Ḥātim (16th c.), Ottoman mathematician.

See: MAMS (III 6), SSM (177), OMLT (87-88).

M1. Commentary on "Light of Arithmetic" (Sharḥ al-Lum`a fī'l-ḥisāb) - Cairo (riyāḍa. 1067), Istanbul (SM Hamid. 880). Commentary on the work (No 783, M5) of Ibn al-Hā'im.

1050. MUHYI AL-DIN AL-FAYUMI

Muḥyī al-Dīn `Abd al-Qadir ibn Muḥammad al-Fayyūmī al-Aufī (d. 1613), from Fayyum, Egypt, worked in Cairo; mathematician, astronomer, knowledgeable in law and music.

See: GAL (II 470), GAL² (486), MAA (193-194), MAA² (180), MAMS (II 578), OMLT (111-112), SSM (100). In MAA he was identified with al-Manūfī (No 1018).

M1. Commentary on "Right Direction of Pupils" (Sharḥ Murshidat al-ṭālib) - Gotha (1482). Description of the manuscript: Pertsch [3] (110-111). Commentary on the treatise (No 783, M5) of Ibn al-Hā'im.

M2. Commentary on "Delight of Pupils in the Science of Arithmetic" of Ibn al-Hā'im (Sharḥ Nuzhat al-ṭullāb fī `ilm al-ḥisāb li Ibn al-Hā'im) - Cairo (riyāḍa. 304, 558). Commentary on the work (No 783, M7) of Ibn al-Hā'im.

1051. `ALI IBN HAMZA AL-MAGHRIBI

`Alī ibn Walī ibn Ḥamza al-Maghribī (end of 16th c.), from Algeria, worked in Thessalonika and Mecca; Ottoman mathematician.

See: GAL² (II 536), KZ (II 221), MAA² (181), MAMS (II 579), OM (III 284), OMLT (118-123), SSM (172); Tuqan [1] (469-473).

M1. Numerical Gift for those who Posses the Right Direction and Common Sense (Tuḥfat al-a`dād li dhawī al-rushd wa'l-sadād) = Numerical Gift in Substantiation of Arithmetic (Tuḥfat al-a`dād fi'l-ḥisāb takkī) - Cairo (Ṭal`at riyāḍa turki 1). The manuscript described by Zaki [1] is lost. Research: Matviyevskaya [5] (188-190), Tuqan [1] (470-471), Zaki [1].

M2. Poem on Finger Arithmetic (Manẓuma fi ḥisāb al-yad) - Cairo (falak 3957/4).

1052. SHAMS AL-DIN AL-LADHIQI

Shams al-Dīn Muḥammad ibn Muḥammad al-Lādhiqī (16th c.), from Ladhiqiya (ancient Laodicaea); Ottoman astronomer.

See: GAL² (II 1023), MAA (202), MAMS (III 32), OALT (229-232), SSM (91).

A1. Result of Reflections on Operations [of Timekeeping] at Night and Day (Natījat al-afkār fi `amal al-layl wa'l-nahār) = Wish of the Soul on Solution [of problems] of the Sun (Bughyat al-nafs fi ḥall al-shams) - Alexandria (hisab 62), Berlin (5764-5766), Cairo (falak 6700, mīqāt 190/1, 307, Fāḍil mīqāt 222, 226), Istanbul (SM Hacı Beşir Ağa 674/1, Reisülküttab 582/1, Izmirli 758/15), Gotha (1399), Paris (2553), Zakataly (212/5).

A2. Lunar Habtaq Tables (Jadwal habṭaq ai-qamar) - Cairo (mīqāt 639/26 - incomplete, 1108/5).

A3. Bughyat al-Nafs fi Ḥall al-Shams. - Berlin (Ahlwardt 5764), Cairo (mīqāt 198, 1217, 625/1, 565, Fāḍil mīqāt 14, Azhar [317] safa 28898), Istanbul (Univ. AY. 4082/1; Millet, Ali Emiri Arabi 2743), Paris (2553).

A4. Jadāwil Ghāyat al-İrtifā` wa al-Dā'ir min al-Ẓuhr ilā al-`Aṣr wa min al-`Asr ilā al-Ghurūb wa Ḥiṣṣat al-Fajr wa'l-Maṭāli` al-Baladiyya wa Niṣf Qaws al-Nahār wa al-Tawārīkh al-`Arabiyya wa al-Qibṭiyya. - Cairo (7901, 7947), Istanbul (SM Bağdadlı Vehbi 887/4).

A5. Jadwal Maqāmāt al-Kawākib al-Khamsa l'l-Rujū` wa al-İstiqāma. -Istanbul (SM Bağdadlı Vehbi 887/5).

A6. Jadwal al-Maṭāli` al-Falakiyya min Awwal al-Jady wa Tusamma Maṭāli' al-Zawāl. - Istanbul (SM Bağdadlı Vehbi 887/3).

A7. Jadwal Taqwīm al-Shams li Ṭūl "Nadna" min Sāḥil al-Baḥr al-Gharbī `alā al-Raṣad al-Jadīd li Ulugh Beg. - Istanbul (SM Hacı Beşir Ağa 674/2, Izmirli 758/17).

1053. MULLA TARZI

Mullā Tarzī (d. 1616), Indian astronomer.

See: STMI (335).

A1. Mine of Jewels (Ma`dan al-jawāhir) P - Calcutta (Madrasa 82), London (1038; Ind. 432). Astronomical tables calculated for Mogul Emperor Jihangir (1605-1627).

1054. HASAN MUHAMMAD AL-FIRSHURI

Ḥasan Muḥammad ibn Rājī Muḥammad al-Firshūrī al-`Abbāsī al-Kujarātī al-Sarkijī (d. 1616), from Gujarat, Indian mathematician.

See: MAMS (III 43), PL (II 14).

M1. Subtleties of Plenties (Laṭā'if al-fuyūḍ) P - Istanbul (SM AS 2746), Mashhad (152). Mathematical treatise.

1055. MUHAMMAD AL-AKHSASI

Muḥammad ibn Haykal al-Akhṣāṣī (17th c.), Ottoman scholar; timekeeper at the Azhar mosque in Cairo.

See: OALT (348-349), SSM (99).

A1. Brilliant Pearl on Operations with the Sun (al-Durra al-muḍiyya fi'l-a`māl al-shamsiyya) - Cairo (mīqāt 60, 480, 516, Fāḍil mīqāt 81), Istanbul (SM Bağdadlı Vehbi 994).

A2. Jadāwil fi Taqwīm al-Shams wa fi al-sinīn al-Qibṭiyya wa al-`Arabiyya wa ghayr Zālik. - Cairo (7889).

1056. `ABD AL-RAHIM IBN AL-BANNA

`Abd al-Raḥīm ibn al-Bannā (17th c.), Egyptian astronomer.
See: SSM (92).
A1. [Planetery Tables] - Cairo (Ṭal`at mīqāt 113/1).

1057. MUHAMMAD IBN AL-QALA`I

Muḥammad ibn al-Qala`ī (17th c.), Egyptian astronomer.
See: SSM (92).
A1. [Planetery Tables] - Cairo (Ṭal`at mīqāt 113/1).

1058. BAHA AL-DIN AL-`AMILI

Bahā al-Dīn Muḥammad ibn al-Ḥusayn al-`Āmilī (1547-1622), born in Baalbek, Syria, studied in Irān; was sheikh al-Islam (religious chief of Iranian muslims) under Iranian Safawid Shah `Abbās I (1587-1629) in Isfahan. He was also a mathematician, astronomer and philosopher.

See: GAL (II 546-547), GAL^2 (II 595-597), KZ (III 168, VI 293), MA (107-108), MAA (194), MAA^2 (180-181), MAMS (II 579-584), PL (II 11-14, 86-87), PL^2 (143-144), SSM (160-161), STMI (299-300, 392); Browne [6] (407-408, 426-428), Farmer [4] (66), Kohlberg [1], Matviyevskaya, Ibadov, and Sadritdinova [1], Muhammadiyev [2], Naficy [2], Shawky [4], Sobirov [1], Tuqan [1] (474-482), Yaltkaya and Adnan [1] (IA). Collection of papers: "al-`Āmilī" [1]

E1. The Bowl of Darwish (al-Kashkūl) - Cairo (III 303), Cambridge (Sup. 1044/1), Hyderabad (II 1516, III 624), London (Ind. 834-840, Ross 1120), Mashhad (90-108), Rampur (I 611), Tehran (295), Vienna (421).

Edition: al-`Āmilī [6]. Edition of mathematical chapters: Shawky [4] (165-204). Russian translation of mathematical chapters: Matviyevskaya, Ibadov, and Sadritdinova [1]. Research: Matviyevskaya and Ibadov [3]. Persian translation by Mulla Muḥammad ibn Mulla Najaf `Alī Bakūyī is mentioned by Bakikhanov [1] (174), [2] (218), [3] (213). Encyclopaedical treatise containing mathematical chapters: al-`Āmilī [9] (15, 41, 111, 127-128, 196, 216-218, 233, 272, 282, 291, 304, 313, 326-327, 329-330, 338).

M1. Essence of Arithmetic (Khulāṣat al-hisāb) – Aleppo (912, 1773; Ahmad Sadiq 66, 159; IHAS Antak. 241/1; al-Mawlawi 753), Aligarh (Azad. `Abd al-Hayy 69, Subh. 511/2; Sul. 171/38, 180/40; Univ. 2), Baghdad (352/2, 2935-2939, 8792, Sup. 320; Rajab 258; Sarkis 115), Baku (A 197/2, 208/2, 376/1, 548, B 81/1, 139/2, 208/2, 376/4, 389, 396, 407/4, 760/3, 789, 1117, 1869/2, 1936, 2120/1, 2131/1, 2166/1, 2360, 2657, 3121/4, 3262, 3502, 3674, 3701, 3813/2, 3863/2, 3898/1, 4403/2, 5657/1, 5775/2, 6247/1, D 455), Berlin (5998, oct. 3603), Birmingham (1894), Cairo (falak 3789/1, 3928/1, 4297/1, 4390/1, hay'a 27/2, majlis 59/4, 103/2, 607/1, riyāda. 44, 305, 647, 660/1, 664, 726, 766, 825/1, 901, 1028, `ulūm 19118/9, Khalīl riyāda. 3, Tal`at majlis 635/34, Taymūr riyāda. 22, 84, 106/1, 127/2, 222/1, 258/1, Zaki 730, 786/2; Azhar VI 143), Calcutta (Buhar 352/2), Cambridge (Sup. 437, Browne 196), Dhaka (117/6), Dushanbe (1611/2, 2121/7, Ferd. 931, 1239, 1260/2, 1788, 1836/2, 3), Göttingen (68), Hyderabad (I 69; jadid 25, 584, 3295/1, 3746, 4473-4474, 4527, 4550, riyāda. 69; Osm. 1055, 1063; Salar ryad. 10-11, Sa`id riyāda. 3), Jerusalem (Yehuda 846; Khalidi 24), Isfahan (I 796/69), Istanbul (BU Veliyuddin 2326; Köprülü 343, 349; NO 2973, 2975-2976; SM Aşir 228, Fatih 3444-3445, Hamid. 870, 871/1, 872/1, Laleli 2712, 2744, Selim 729), Lahore (Univ. 1/1), Leiden (6810/2), London (1345/2; Ind. 758), Lucknow (462, 41567), Mahachqala (185/1, 187/1, 356/1, 405, 594, 707, 948, 1165, 1183/1, 1983/3, 1999, 2223), Manchester (Lind. 380, 705/b), Mashhad (316-317, 8547/7; Gawharshad 141/2, 595/1, 622/1, 683/2, 970/3, 1085/2, 1103/1, 1124/3, 1143/2, 1150/3, 1479/2, 1610/3, 1619/1, 1671/3, 1755/1, 1787; Mirza Ja`far 154/1; Nawwab 6; Sulaym. 109/1; Univ. 98), Moscow (87/4), Mosul (60, 69/6, 73, 104, 115/6, 140/1, 150/1, 205, 216, 249, 287; Diwaji 181/1), Najaf (Ayatallah 55), Patna (219, 2421), Peshawar (1747), Princeton (1043; Yehuda 222, 1050, 1163, 2291, 2495, 2761, 3184, 4086, 4383, 4626, 5333), Kazan (980, 1056, 1711, 2066, 4427-4428), Rampur (281b, 413/25), Rasht (X 8, 10), Rome (Vat. Rossi 1013, Sbath 64), Samarkand (823908/3, 1008469/3), St. Petersburg (A 671/1, B 817/2, 841/12, 842/7, 1361, 2315/2, 3021/1, 2, 3352, 3556, 3680/2, 3734/8, 4182/3, C 1187/1, 1995; Nat. Khān. 126, 128/2, 138/2; Univ. 671), Sarajevo (691), Tabriz (394, 396-397, 1276), Tashkent (597, 2818/2, 2984/6, 4821/5, 5330/12, 6057/2, 6613/1, 230/3, 6453/2, 6854/2, 7235/6, 7579/1, 7808/4, 8718/1, 9332, 10582, 10701, 10750/1, 11087, 11139/1, 11848/6, 11847, 12170/1; SADUM 100/5, 649/3, 916), Tbilisi (K 13/4, 21/2, 29, L 331/3), Tehran (398/3, 1275, 1319, 2785/5, 4783, 4884/4, 4957; Sipahsalar 1359; Univ. 884, 2819/1, Huquq 335), Tunis (Nat. 18051, 18646/1), Yerevan (174, 204/1, 513, 514/2), Zakataly (249/1).

Persian translation by Rawshan `Alī Jawnpuri: Baku (B 5406/1), Bukhara (25), Calcutta (Buhar 223), London (450a), Samarkand (824101), St. Petersburg (D 486; Nat. Khān. 128/1), Tashkent (567, 6131/1), 7235/6,

11868). Persian translations by `Abd al-`Alī al-Tabrīzī: Patna (1035), by Muḥammad Sadiq al-Tabrīzī: Patna (1036), by Ma`budi al-Shahrudi: Cairo (Ṭal`at riyāḍa. fārisī 1/1), anonymous: Hyderabad (jadid 5704; Osm. 270; Salar riyāḍa 2), London (Ind. 2251), Patna (1032-1034), Rampur (1238).
Editions: al-`Āmilī [1-3, 7, 10], Shawqi [4] (29-163). Edition with German translation by Nesselmann: al-`Āmilī [3]. Editions of Persian translation by Jawnpuri: al-`Āmilī [2, 4]. French translations by Marre: al-`Āmilī [5] (from German), [8] (from Arabic). Russian translation: Matviyevskaya, Ibadov, and Sadritdinova [1] (5-46). Research: De Young [3], J. Ibadov [1] (156-160), [2, 8], Matviyevskaya [39], Matviyevskaya, Ibadov, and Sadritdinova [1] (46-67), Muḥammadiyev [1], Rawshan `Alī [1], Scriba [1a], Shawqi [4], Sobirov [1].
The book contains introduction (definitions) and 10 chapters: 1-2) on arithmetic of integers and fractions, 3-5) on determining unknown quantities by proportions, "two errors", and inversion, 6-7) on geometry and its application to practical problems, 8) on algebra (on powers of unknown quantity to (x^9), their multiplication, linear and quadratic equations, 9) on "noble rules" (rules of summation, algebraic identities), 10) on problems, and conclusion (containing 7 "impossible problems", the 4th problem: "to divide cube number onto two cube parts", that is, a particular case of the Great Fermat Theorem on impossibility of equality ($x^n+y^n=z^n$)for integers (x, y, z and n>2). It is the case for (n=3); this case of Great Fermat theorem was proved by L. Euler in 1763. The book of al-`Āmilī was written ab. 1600 and dedicated to prince Ḥamza, grandson of Safawid Shah Tahmasp I (1524-1575).

M2. Selected from "Essence of Arithmetic" (Muntakhab al-Khulāṣa al-Bahā'iyya) P - Mashhad (4947/4).

M3. Science of Arithmetic (`Ilm al-ḥisāb) - Dushanbe (1611/4, 2043/4, 2609/3), Samarkand (1187140/4).

M4. Treatise on Arithmetic Rules and Geometric Indications (Risāla fī'l-qawā`id al-ḥisābiyya wa'l-dalā'il al-handasiyya) - St. Petersburg (A 134/2).

M5. Treatise on Arithmetic (Risāla dar ḥisāb) P - Samarkand (822823, 1187373), Tehran (Ma`arif 1317/3).

M6. Propositions of Substantiation in Verses or Poem on Geometry (Manẓūmat Ashkāl al-ta`sīs yā urjūza fī'l-handasa) - Tehran (4816/2).

M7. Treatise on the Science on Measurement (Risāla dar `ilm-i misāḥat) P - Cambridge (Sup. 1436/8), Mashhad (5541).

M8. Treatise on the Ratio of the Greatest Height of Mountains to the Diameter of the Earth (Risāla dar nisbat-i irtifā` a`ẓam al-jibal ilā quṭr al-arḍ) P - Aligarh (Azad Sul. 169/29), Baku (B 16/4), Hyderabad (sham. 759; Said. hay'a 17/2), Madras (242), Mashhad (8613).

M9. Commentary on Eighth Chapter (Sharḥ al-bāb al-thāmin) = Comments on Eighth Chapter on Algebra and Almucabala (Ta`līqāt `alā al-bāb al-thāmin fī'l-jabr wa'l-muqābala) - London (765/7 - under the first title), Princeton (Yehuda 4619 - under the second title). Commentary on algebraic chapter VIII of M1.

M10. Sea of Arithmetic (Baḥr al-ḥisāb) - is mentioned in M1 whereit is called "a great work".

A1. Explanation of Celestial Spheres (Tashrīḥ al-aflāk) - Alexandria (funun 65/3), Aligarh (Azad `Abd al-Hayy 352/1, 653/35, Subh. 520/2), Baghdad (2960), Baku (A 208, B 422/6, 2315, 2924/3, 4, 4147/2, 4176/1, 5408/4, 6036), Berlin (5703), Bombay (16, 179, 258), Cairo (hay'a 27/2, 58, 82, riyāḍa. 44, `ulūm 19118/7, Taymūr majlis 246/7, riyāḍa. 130/1), Calcutta (Buhar 2, 342; Madrasa 342), Hamburg (123), Jakarta (Sup. 620), Hyderabad (jadid 1416, 4548/1, riyāḍa. 121, 346; Salar hay'a 4/1-2, 5, 27/3), Istanbul (SM Laleli 2116/2, 2117), Lahore (Univ.), Leipzig (859/1), London (532/4, 1345/1, 6280, Sup. 763/1, 809, 1249/2; Ind. 1043/6), Mashhad (25, 5252, 5468-5471), Patna (1053, 2470/1, 2471/1, 2547), Princeton (998/9, Yehuda 1017, 1050, 2495), Kazan (1878), Rampur (hay'a 13), Rome (Vat. Sbath 123), St. Petersburg (B 2563/2, 2999/5, 3556/4, 4102), Tabriz (210), Tashkent (5619/5, 9346/1, 9733/1), Tehran (23/2, 1835/1, 2785/7, 4884/3; Univ. 858), Tunis (Nat. 18646/2), Yazd (Waziri 488/5).

A2. Perfect Pearl in Astronomy (al-Durra al-tāmma fī'l-hay`a) - St. Petersburg (B 2320/1, 3263/3).

A3. Treatise in Verses on Astronomy (Risāla-yi manẓūma fī'l-hay`a) P - Kazan (18).

A4. Problems in Astronomy (Masā'il fī'l-hay`a) - Tahran (4816/4), Tashkent (5919/4).

A5. Seventy Chapters on the Knowledge of the Astrolabe (Haftād bāb dar ma`rifatt-i asṭurlāb) = Gift to Hatim on the Science of the Astrolabe (Tuḥfa-yi Ḥātimiyya dar fann-i asṭurlāb) P - Aligarh (Univ. 128/21), Baku (B 16), Bombay (Firuz 58/2), Cairo (Ṭal`at mīqāt fārisī 2/1), Hyderabad (riyāḍa. 160, 295, 324; Osm. 282; Salar hay'a 36/1, 37/3), Istanbul (NO 2899, 2916), Kabul (Archives 342), Mashhad (5641), Oxford (1508, 2827/2), Patna (18), Rampur (1198-1199), St. Petersburg (Nat. 130/3), Tashkent (466/1), Tehran (159, 206/6, 1233/14, 2467/2, 3763/4, 4061/5; Dihhuda 41/2; Ma`arif 335, 1368/4; Malik 3229/9, 3402/5; Mahdawi 462/2; Nafisi 412/4; Sipahsalar 698/4, 7387; Univ. 1455, 2651/1, 4933, Ilah. 82/1, 208/1, 329/3), Yazd (Jami` 430/2),

Yerevan (204/4). Arabic translation by Mulla `Alī Efendi al-Daghistānī: Cairo (falak 3824/24, mīqāt 1083). Edition: al-`Āmilī [9a].

A6. Treatise on the Construction of the Astrolabe (Risāla fī'l-asṭurlābi) - Aligarh (Azad Radi al-Dīn 42/21), Hyderabad (Salar hay'a 4/4).

A7. Treatise on the Tympanum of the Astrolabe (Risālat al-ṣafīḥa fī'l-asṭurlāb) = Tympanum (al-Ṣafīḥa) - Baghdad (2973; Mahfuz), Berlin (5801), Cairo (falak 4035, `ulūm 19118/7, Zaki 456/2), Hyderabad (Said. hay'a 15; Salar hay'a 4/3, 10, 31/7), London (1346/1, Sup. 763/5), Mahachqala (182/2), Mashhad (55; Farhang 22/1; Gauharshad 1049/1, 1085/3), Mosul (Nabi Shit), Najaf (Ayatallah 213), Paris (2371/2), Princeton (Yehuda 1017, 4616), Rampur (30/1), St. Petersburg (Nat. Khān. 138/4), Tehran (2785/6, 4345/1, 4900/56), Yazd (Waziri 488/4). Persian translations: Oxford (1508), Rasht (majm. 71/11), Tehran (206; Univ. 4277).

A8. Treatise on the Astrolabe (Risāla fī'l-asṭurlāb) - Baku (A 197/3), Berlin (IGMN II. 7), Mashhad (5282, 5510), Qazimiya (Mahfuz 186), Yazd (Waziri 893/7). Description of the Berlin manuscript: Ruska and Hartner [1] (177-178).

A9. On the Science of the Astrolabe (Dar `ilm-i asṭurlāb) P - Bukhara (209).

A10. Garden of the Crescent (al-Ḥadīqa al-hilāliyya) - Mashhad (3140, 3340, 7011, 7613), Tehran (3346/1).

A11. Treatise on the Knowledge of the Qibla (Risāla fī ma`rifat al-Qibla) = Research on Direction of Qibla (Taḥqīq jiha al-Qibla) = Direction of the Qibla (Jiha al-Qibla) - Baku (B 16/2), Mashhad (2750-2752, 6107, 7022, 7458, 7686), Tehran (3346/3; 4900/55; Sipahsalar 1028), Yazd (Waziri 909/1).

A12. Rising of Two Suns and Elixir of Two Happinesses (Mashriq al-shamsayn wa iksīr al-sa`ādatayn) - Qazimiya (Mahfuz 305), Tehran (3332/1).

A13. Treatise on Investigation of the Globe (Risāla fī taḥqiq al-kura) - Tehran (309-310, 2801/5), Tus (5).

A14. On Knowledge of the Calendar (Dar ma`rifatt-i taqwīm) P - Baku (A 208/3).

A15. Notes on " The Astrolabe" (Ta`līqāt `alā'l-Asṭurlāb) P - are mentioned in A1 (Shawky [1], 93).

A16. Super-commentary on Commentary on "Compendium" of al-Jaghmini (Ḥāshiya `alā sharḥ Mulakhkhaṣ al-Jaghmīnī) - Aligarh (Azad Subh. 168/28), Hyderabad (Salar hay'a 9/1), London (1346). Super-commentary on commentary (No 808, A1) by al-Rumi on the work (No 547, A1) of al-Jaghmīnī.

Me1. Legal Balance (Awzān-i shar`ī) P - Tehran (Univ. 975/3).

L1. [Poems] - Gazals and Rubā`ī in Arabic and Persian. Edition of the Persian poems: Nafisi [2] (120-149).

1059. MIRZA QAZI ARDAKANI YAZDI

Mīrzā Qāḍī ibn Kāshif al-Dīn Miḥammad Ardakānī Yazdī (16-17th c.) from Yazd, came from Ardakan; astronomer; worked at the courts of Muḥammad Khudabanda (1578-1587) and `Abbās I (1587-1629) the Safawid Shahs of Iran.

See: MAMS (II 584-585), PL (II 90-91), STMI (314).

A1. Gift of Muḥammad (al-Tuḥfa al-Muḥammadiyya) P - Mashhad (40, Mawlawi 523/2), Tehran (4802/8; Malik 6291/2; Univ. 3959/1, Piz. 642/7, 5160). Treatise is dedicated to Shah Muḥammad Khudabanda.

A2. Gift to `Abbas (Tuḥfa-yi `Abbāsiyya) P - Bombay (Firuz 72), Hyderabad (riyāḍa. 140), Tehran (Malik 6191/1). Treatise is dedicated to Shah `Abbas I.

A3. Treatise on the Sine Quadrant (Risāla dar rub`-i mujayyab) P - Tehran (Univ. Adab. 159/21).

1060. YUNIS AL-RASHIDI

Yunis ibn `Abd al-Qādir ibn Aḥmad ibn Muḥammad ibn Abī'l-Ḥayr al-Rashīdī al-Atharī al-Shāfi`ī (d. 1611), Ottoman astronomer.

See: MAMS (II 585), OALT (262-263).

A1. Limit of (Uses) in Commenting on Ten Sections (Ghāyat al-su'l (Fawā'id) fī sharḥ al-`ashrat fuṣūl) - Berlin (IGMN II. 8), Cairo (majlis 109/1, mīqāt 310, 532/2, 544, 622, Fasdil mīqāt 143, Taymūr riyāḍa. 63, Zaki 968/1), Jakarta (Sup. 619), Istanbul (SM Hacı Maḥmūd 5703/2). Description of the Berlin manuscript: Ruska and Hartner [1] (179-180). Commentary on the work (No 815, A3) of Ibn al-Majdī.

1061. SULTAN MUHAMMAD AL-BALKHI

Sultān Muḥammad ibn Darwīsh Muḥammad al-Muftī al-Balkhī (16-17th c.), astronomer and geographer, worked in Balkh.

See: MAMS (II 585), PL (II 135-137).

E1. Collection of Rarities (Majma' al-gharā'ib) P - London (426; Ellis M 394), Oxford (415), Paris (217), St. Petersburg (B 785/1, 795, 1007/3, 2225/3, 2419, C 607/1, 608-609, 1415/4, 1577, 1858/6, 1918/1, 2340/2; Univ. 908, 965a), Tashkent (29/2, 101/2, 111, 615/1, 1262, 1494/1, 3682/1, 3748-3749, 4359, 4523).
Description of the St. Petersburg manuscripts: Miklukho-Maclay [3] (62-74). Description of the Tashkent manuscripts: SVR (I 297-298, V 311-312Research: Barthold [4] (340-341), Tahirjanov [1].

1062. ABU'L-BARAKAT QADIRI HINDUSTANI

Abu'l-Barakāt Qādirī Hindustānī (16-17th c.), brother of Abu'l-Fazl `Allāmī (No 1047), who was the vizier of Mogul Emperor Akbar (1556-1605).
See: MAMS (II 586).
A1. [Treatise on Phases of the Moon, on Eclipses of the Moon and the Sun, and their Astrological Influence] - Tashkent (531/19). Description of the manuscript: SVR (I 229).

1063. HUSAYN AL-KHALKHALI

Ḥusayn al-Ḥusaynī al-Khalkhālī (d. 1605) from Khalkhal, Southern Azerbaijan; mathematician and astronomer, pupil of Mirzajan al-Shirazi (No 1003).
See: GAL (II 544-545), GAL² (II 591), KZ (I 298, 478, II 481, III 437, IV 218, V 417, VI 561), MAMS (II 586-587) , OALT (246-249), SSM (161).
M1. Commentary on "Essence of Arithmetic" (Sharḥ khulāṣat al-ḥisāb) - Ashkhabad (2537/9), Tashkent (6131/1, 6864/2, 11087), Tunis (Nat. 17947). Commentary on the treatise (No 1058, M1) of al-`Āmilī.
A1. Explanation of the Indian Circle (Sharḥ al-dā'ira al-hindiyya) = Treatise on the Indian Circle (Risāla al-dā'ira al-hindiyya) -Amasya (1108/4), Baghdad (Mathaf al-Iraqi 7905/6), Baku (B 536, 1164, 2166/5, 28373, 3996, 4128, 4191/2, 4301/3, 4623), Cairo (mīqāt 490/1, 1119, Fāḍil mīqāt 143, Ṭal'at majlis fārisī 26/5, Taymūr majlis 177/7, riyāḍa. 91, Zaki 786/9), Edirne (Selimiye 690/2), Gaziantep (144/8), Gotha (1417/4), Istanbul (SM Laleli 2136/1, Atıf Efendi 1692/3, Raşid Efendi 989/23, BU 4662/2, Veliyuddin Efendi 2313/4), Kastamonu (1555/5, 281/3), Mosul (73, 75/3), St. Petersburg (C 2093/1; Nat. 128/3). In addition to those stated above, 39 manuscript copies are mentioned in OALT. Treatise was written in 1598. Research: Sédillot [7].
A2. Treatise on the Knowledge of Times of Sunsets (Risāla fī ma`-rifat awqāt al-ghurūb) - Princeton (997). Description of the manuscript: Hitti, Faris and `Abd al-Malik [1] (315).
A3. Treatise on Commentary of the Words of the Almighty on Sunset and on Ways of Determining the time of Sunset and the Azimuth of Qibla by Geometry (Risāla fī tafsīr qawlihī ta`ālā li dulūk al-shams wa ṭarīqat ma`rifat waqt al-zawāl wa samt al-Qibla bi'l-adilla al-handasiyya) - Berlin (5701-5702), London (Sup. 761/2), Princeton (Yehuda 819, 4455, Houtsma 368), St. Petersburg (A 345/25).
A4. Treatise on Prayer times and the Azimuth of Qibla (Risāla fī awqāt al-ṣalāt wa samt al-Qibla) - Mahachqala (186/1).
A5. Explanation of the Celestial Sphere(s) (Tashrīḥ falak, Tashrīḥ al-aflāk) - Baku (B 3262), St. Petersburg (B 4262/2).
A6. Noble [Treastise] (al-Sharīfa) - Ashqabad (3067).
A7. Commentary on "Guarante" on Timekeeping (Sharḥ al-Wiqāya fī'l-mīqāt) - Mahachqala (218/1). Commentary on chapters on timekeeping of the work (No 706, E3) of al-Bukhārī.
A8. Risāla fi Manāzil al-Qamar - Istanbul (SM Esad Efendi 3455/5).

1064. AL-KUNJUDI

Al-Kunjudī (16-17th c.), mufti in Amasya (Turkey); astronomer.
See: SSM (173).
A1. Treatise on the Indian Circle (Risāla fi'l-dā'ira al-hindiyya) - Cairo (Fāḍil majlis 143/33, Taymūr majlis 391/4).

1065. MUHAMMAD IBN MANSUR

Muḥammad ibn Manṣūr (16-17th c.), Egyptian astronomer; worked at the court of Sultan al-Nasir ibn Qalaun.
See: GAL² (II 485), MAMS (II 587).
A1. Calendar of the Arab Lunar Year (Taqwīm al-sana al-`arabiyya al-qamariyya) - Paris (2571/1).

1066. NUR AL-DIN AL-ANSARI AL-MAKKI

Nūr al-Dīn ʿAlī ibn Abī Bakr ibn Jamāl al-Anṣārī al-Makkī al-Shāfiʿī (16-17th c.), from Mecca, mathematician.
See: GAL[2] (II 536), MAMS (II 587).
M1. Gift from Hijaz on Selected Arithmetic Operations (al-Tuḥfa al-Ḥijāziyya fī nukhbat al-aʿmāl al-ḥisābiyya) - Jakarta (Sup. 611).
M2. Victory of Granting Delight to Reckoners (Fatḥ al-wahhāb ʿalā Nuzhat al-ḥussāb) - Baku (B 6217).

1067. MULLA MUHAMMAD AL-GHULUDI

Mulla Muḥammad al-Ghulūdī (Golodinskiy) (beginning of 17th c.), from Gholoda in Daghistan, Daghistani mathematician and philosopher, founded a madrasa where he also taught.
See: MAMS (II 587); Saidov [1] (120).

1068. MUHAMMAD AMIN HIJAZI QUMMI

Muḥammad Amīn ibn Mīrzājān Najāfī Hijāzī Qummī (first half of 17th c.) from Qumm, mathematician, pupil of al-ʿĀmilī (No 1058).
See: MAMS (II 587), PL (II 91).
M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) = Explaining the "Essence of Arithmetic" (Mūḍiḥ al-Khulāṣa) P - Baku (A 237/2 - under the first title), Mashhad (171 - under the second title). Commentary on the work (No 1058, M1) of al-ʿĀmilī.
A1. Treatise on the Astrolabe (Risāla dar usṭurlāb) P - Mashhad (56-57, 5283-5284; Mawlawi 513/3), Tehran (Mahdawi 282/24).

1069. MUZAFFAR AL-JUNABADI

Muẓaffar ibn Muḥammad ibn Qāsim al-Junābādī (Gunābādī) (16-17th c.), worked in Isfahan at the court of Safawid Shah ʿAbbās I (1587-1629), Persian mathematician and astronomer.
See: KZ (II 440), MAMS (II 588), PL (II 88-89), SSM (160), STMI (336-337).
A1. Commentary on "Twenty Chapters on the Astrolabe" (Sharḥ-i bīst bāb dar asṭurlāb) P - Aligarh (Azad Subh. 520/19), Dushanbe (382), Hyderabad (riyāḍa. 429), Mashhad (Mawlawi 69, 271-272, 1265/1), Tehran (Malik 5724/1, 6267/2; Mahdawi 83911/1; Muʿtamid 121; Sipahsalar 625-626; Univ. 691, 1923/2, 2129, 2614, 4502, 5219, Adab. 65, 137, 140, 183, Ilah. 95, 149/1, 152-153, 242/1, 318, 710/1). Edition: al-Junabādī [2]. Commentary on the work (No 606, A14) of al-Ṭūsī, written in 1610.
A2. Commentary on "Twenty Chapters on the Calendar" (Sharḥ-i bīst bāb dar taqwīm) P - Aligarh (Azad. Subh. 19, 21), Baku (B 160, 3294), Cairo (Fāḍil mīqāt fārisī 3, Ṭalʿat mīqāt fārisī 1/2), Cambridge (Sup. 1487 - a fragment), Istanbul (NO 2791), London (Ind. 2247), Madras (Firuz 9), Mashhad (116-117; Gauharshad 367, 573, 685, 1913), Oxford (2734), Kazan (19), Rasht (III 210), St. Petersburg (Nat. Khān. 120), Tashkent (3641/1, 9739), Tbilisi (K 34/68, 59/95), Tehran (Mahdawi 239/1). Edition: al-Junabādī [1]. Description of the Tashkent manuscripts: SVR (VIII 84-85). Commentary on the treatise (No 938, A2) of al-Birjandī.
A3. Indications of Astrologers (Tanbīhāt al-munajjimīn) P - Baku (B 169/2), Bombay (Firuz 10-11), Cairo (Fāḍil mīqāt fārisī 2, Ṭalʿat mīqāt fārisī 10, 13), Hyderabad (riyāḍa. 88), Istanbul (Atıf 1690; NO 2768; SM AS 2700), London (Sup. 11003), Mashhad (Mawlawi 19), Paris (2402-2403), Tabriz (246-247), Tehran (166, 2444/1; Malik 3107, 3417, 3449, 3649, 3651; Muʿtamid 115/4; Sipahsalar 635-639, 7399-7400; Univ. 1466, 3480, 3675, 3812, Adab. 254, Ilah. 130, 533), Yazd (Jāmiʿ 10099/1; Waziri 893/3). Turkish translation by ʿUmar ʿAbdallah Nuzhatī - Cairo (Ṭalʿat falak turkī 13). Description: Kennedy [39] (174-176). Research: Gingerich [1], Kennedy [39]. Treatise in 6 chapters plus introduction and conclusion, dedicated to Shah ʿAbbās I (1587-1629), was written in 1622 in Isfahan.
A4. Qibla of Horizons (Qiblat al-āfāq) = Gift to Hatim (Tuḥfa-yi Ḥātimiyya) P - Najaf (Khwansari), Oxford (2736), Rayy (ʿAbd al-ʿAẓīm 371/2), Tehran (Malik 6267/4; Sipahsalar 7428/3, 8360/8; Univ. 1923/3, 3828/5, Ilah. 149/2, 190/4).
A5. Treatise on Determining the Line of Meridian (Risāla dar istikhrāj-i khaṭṭ-i niṣf al-nahār) P - Mashhad (5505).

A6. Treatise on Determining the Line of Meridian and Qibla (Risāla dar istikhrāj-i khaṭṭ-i niṣf al-nahār wa ma`rifatt-i Qibla) P - Mashhad (5539; Farhang 4/1).

A7. Determining Solar Eclipses for the Latitude of Kashan (Istikhrāj-i kusuf-i āftāb ba ṭul-i Kāshān) P - Tehran (Senat 7572/6).

A8. Mean (Wasīla) P - Aligarh (Azad `Abd al-Ḥayy 139/32 - incomplete). Commentary on the work (No 606, A19) of al-Ṭusī, written in 1605.

1070. MUZAFFAR NUJUMI

Muẓaffar Nujumī (16-17th c.), Indian astronomer.

See: STMI (336-337).

A1. Copy of the Science of Astronomy (Nuskha dar `ilm-i hay'at) P - London (Ind. 2247), Oxford (2734). Commentary on the work (No 938, A2) of al-Birjandī.

1071. AL-BURSAWI (HOCA ABDURRAHMAN EFENDİ)

Al-Bursawī (d 1748), from Bursa, Turkish mathematician.

See: SSM (177), OMLT (189-190).

M1. Commentary on "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Cairo (`Abdah 23). Commentary on the treatise (No 1058, M1) of al-`Āmilī. The complete list is given in OMLT.

1072. HAJJI HUSAYN YAZDI

Ḥājjī Ḥusayn Yazdī (16-17th c.), from Yazd, mathematician.

See: MAMS (II 589).

M1. Commentary on "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - London (Ind. 762), Mashhad (124), Tehran (Mahdawi 358/3). Commentary on the work (No 1058, M1) of al-`Āmilī.

1073. MUSTAFA ISTANBULI

Muṣṭafā ibn Yūsuf Istānbūlī (d. 1620), from Istanbul, Turkish mathematician.

See: MAMS (III 26), OM (III 302), OMLT (123-124).

M1. Mine of Mysteries on the Science of Arithmetic (Ma`dan al-asrār fī `ilm al-ḥisāb) - Istanbul (SM Şehit 1995), Manisa (1748/5), is mentioned in OM. The complete list is given in OMLT.

1074. MUHAMMAD SHABRAMALLISI

Muḥammad ibn `Alī ibn Muḥammad ibn `Alī Shabrāmallisī al-Malikī al-Aẓharī (16- 17th c.), mathematician, astronomer and author of mystic treatises.

See: GAL (II 480), GAL² (II 493), MAMS (II 589), OALT (267-268), OMLT (128-131), SSM (100).

M1. Explanation of Mystery on Arithmetic by Figures (Iḍā ḥ al-muktatam fī ḥisāb al-arqām) - Cairo (Fāḍil riyāḍa, 3). Arithmetic treatise in 2 parts.

M2. Guide for the Science on Properties of Numbers (Irshād li'l-`ilm bi khawāṣṣ al-a`dād) - Berlin (5997).

M3. Right Excerpts on the Construction of Numerical Magic Squares Selection from (al-Nubdha al-wafiya fī waḍ` al-awfāq al-`adadiyya) - Cairo (riyāḍa. 309), Paris (2698/3).

M4. Extension of Information on the Construction of an Altar for Deliverance from the Plague (Ifshā` al-naba' `an waḍ` madhbaḥ raf` al-waba') - Princeton (Yehuda 1809).

M5. Aim of the Reckoner and Sufficient for the Scribe (Bughyat al-h`āsib wa bulghat al-kātib) - Cairo (riyāḍa. 1065). Arithmetic treatise in 2 chapters.

M6. Joys of Simplification of Methods of Measuring Areas (Mabāhij al-taysīr bi manāhij al-taksīr) - Cairo (riyāḍa. 299/1). Treatise in 2 chapters plus conclusion.

A1. Notable Pearl on the Construction of Planes of Surplus of Turn Geometrically (al-Durra al-bahā'iyya fī waḍ` basā'iṭ faḍl al-dā'ir bi ṭuruq al-handasiyya) - Algiers (1467/1), Cairo (Fāḍil mīqāt 80), London (Ind. 772/2), Princeton (Yehuda 328, 1809/1). Treatise was written in 1612.

A2. Joy of Talk on Predicting All Events (Bahjat al-muḥādith fī aḥkām jumlat al ḥawādith) - Alexandria (hisab 44), Berlin (5890), Cairo (mīqāt 134/2, 155, 972, Taymūr riyāḍa. 118/1), Paris (2597).

A3. Treatise on Determining the Arguments about Time by Geometry (al-Sundusa fī ma`rifat ḥiṣaṣ al-awqāt bi'l-handasa) - Cairo (Azhar VI 308), Princeton (Yehuda 1809).

1075. MUHAMMAD AL-MANASHIRI

Muḥammad ibn Maḥmūd al-Manāshirī (16-17th c.), Ottoman astronomer.

See: GAL (II 427), OALT (274-275), SSM (100).

A1. Book on Rotating Celestial Sphere for the Brilliant Sun and the Wandering Moon (Kitāb al-falak al-dawwār li'l-shams al-munayyira wa'l-qamar al-sayyār) - Cairo (mīqāt 184/2). Treatise on the movement of the Sun and the Moon in 5 chapters.

A2. Nafḥat al-misk al-khitām wa manḥā al-mutanassik min al-anām - is quoted in OALT

1076. SHIHAB AL-DIN AL-`AJMAWI

Shihāb al-Dīn `Abd al-Qādir ibn Aḥmad ibn Ḥasan al-`Ajmawī al-Azharī (16-17th c.), timekeeper at the madrasa of Sultan Ḥasan in Cairo.

See: GAL^2 (II 1018), MAMS (III 5), OALT (331), SSM (100).

A1. Delight of the Observer in Determining Intervals of Time (Nuzhat al-nāẓir fī ma`rifat mā bayna al-awqāt min al-dawā'ir) - Cairo (Ṭal`at mīqāt 223, Zaki 287), Paris (2578/2).

1077. `ATAALLAH QADIRI

`Aṭā'allāh Qādirī (16-17th c.), Indian mathematician and astronomer, worked in Ahmadnagar.

See: MAMS (II 589), STMI (297, 391).

M1. [Mathematical Treatise] P - Hyderabad (riyāḍa. 7). Treatise was written in 1590-1594 in Deccan.

A1. Treatise on Operations with the Sine Quadrant of Horizons (Risāla dar ma`rifatt-i `amal-i rub`-i mujayyab āfāqī) P - Aligarh (Azad. Ḥabīb 44/6), Hyderabad (riyāḍa. 16, 72, 136; Salar hay'a 35).

1078. `ABD AL-RAHIM SIDDIQI FAKHRI

`Abd al-Raḥīm ibn Ṣāliḥ Muḥammad ibn Nāṣir al-Dīn Ṣiddiqī Fakhrī (16-17$^{th}$ c.), Indian astronomer, worked under Sultan Khalīlallah Ibrāhīm `Adil Shah (1579-1626) in Bijapur.

See: MAMS (III 8), PL (II 86), STMI (277).

A1. Limit of Investigation (Ghāyat al-taḥarrī) - Calcutta (1494/1). Treatise on determining the azimuth of Qibla.

A2. Way of Investigation (Minhāj al-taḥqīq) - Calcutta (1494/2).

A3. Treatise on the Astrolabe (Risāla dar asṭurlāb) P - Calcutta (1494/3). Commentary on the treatise (No 606, A13) of al-Ṭūsī.

A4. Treatise on Magnitudes of Times of Prayer "Namaz" (Risāla-yi maqādir-i awqāt-i namāz) P - Hyderabad (Salar hay'a 38/2). Treatise on prayer times and the azimuth of Qibla in numerous cities of India, Iran, Iraq, Syria, and Egypt.

1079. MUHAMMAD RAHIM BADKUBI

Muḥammad Raḥīm Bādkūbī (16-17th c.), from Baku, astronomer.

See: MAMS (III 33).

A1. Commentary on "Astronomy" of `Alī al-Qūshjī (Sharḥ-i hay'at-i `Alī Qūshjī) P - Baku (B 2451/1). Commentary on the treatise (No 845, A1 or A2) of Alī al-Qūshjī.

A2. Commentary on "Thirty Chapters" (Sharḥ-i Sī faṣl) P - Baku (B 2451/2). Commentary on the work (No 606, A16) of al-Ṭūsī.

1080. MUHAMMAD BAQIR AL-YAZDI

Muḥammad Bāqir ibn Zayn al-`Ābidīn al-Yazdī (d. ca 1637), from Yazd, mathematician and astronomer, pupil of al-`Āmilī (No 1058).

See: GAL² (II 591, 1024), GAS (V 115), MAMS (II 590-591), SSM (161), STMI (407), STMI (407), TIFI (303-304); G. Yusupova [3].

M1. Selected from Arithmetic (`Uyūn al-ḥisāb) - Aligarh (Azad Quṭb al-Dīn 35/3), Baku (B 414), Cairo (riyāḍa. 793/2, 822, Ṭal'at majlis 882/1), Calcutta (2152), Hyderabad (jadīd 2765; Sa`id riyāḍa. 26), Mashhad (Gauharshad 949, 1920; Univ. 319/1), Mosul (179/136), Najaf (Ayatallah 91/1), Patna (2420), Tehran (199; Univ. 4789). Persian translation by Muḥammad Baqir Husayni: Tehran (2130). Description of the Patna manuscript: `Abd al-Hamid [1] (15-16). Edition of the chapter of amicable numbers: Rashed [2] (222-226). English translation by Tytler: al-Yazdī [1]. Research: Djafari Naini [2].

Book in 7 chapters: 1) arithmetic of integers, 2) arithmetic of fractions, 3) "arithmetic of astronomers", 4) measurement, 5) solution of equations by means of proportions, 6) solution of equations by means of "two errors", 7) solution of equations by means of algebra.

Research of the chapter on the extraction of roots: Tytler [2]. Research: Ja`fari Naini [1](4-51) (amicable numbers), (57-72) (equilibrium numbers'), (110-118, 158-161, 174-181) (indefinite equations), Rashed [40].

M2. Essence of Arithmetic (Zubdat al-ḥisāb) P - St. Petersburg (B 2388).

M3. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-Ḥisāb) - Mashhad (8528). Commentary on the work (No 1058, M1) of al-`Āmilī.

M4. Commentary on the Tenth Book of Euclid's "Elements" (Sharḥ al-maqāla al-`āshira min Uṣūl Uqlīdis) - Tehran (Milli 864).

M5. Commentary on Ten Books of [Euclid's] "Elements" (Sharḥ al-`ashrat maqālāt min kitāb al-Uṣūl) - Tehran (Mu`tamid 117/14).

M6. Commentary on Exposition of Euclid's "Elements" (Sharḥ Taḥrīr Uṣūl Uqlīdis) - Tehran (136). Commentary on the work (No 606, M1) of al-Ṭūsī.

M7. Super-commentary on the Exposition of "Book on Sphere and Cylinder" (Ḥāshiya `alā Taḥrīr kitāb al-kura wa'l-usṭuwāna) - Tehran (171/1). Commentary on the work (No 606, M4) of al-Ṭūsī.

M8. Commentary on the Exposition of "Book on Spheres" of Theodosius (Sharḥ Taḥrīr kitāb al-ukar li Thaudhūsyūs) - Tehran (Mu`tamid 117/17). Commentary on the work (No 606, M7) of al-Ṭūsī.

M9. Comments on "Spherics" of Menelaus (Ḥawāshī dar Kuriyyāt-i Manālawus) P - St. Petersburg (Nat. Khān. 144/9), Tehran (Mu`tamid 177/17a). Commentary on the work (No 606, M8) of al-Ṭūsī.

M10. Opening Hidden (Futūḥāt-i ghaybiyya) P - Mashhad (144; Univ. 319/2). Commentary on the treatise (No 256, M3) of Abū'l-Wafā'.

M11. Book on the Proof of Assertion that Surface of a Sphere is four-fold [Area of Great Circle] (Maqāla fīhā burhān `alā qawl saṭḥ al-kura arba`at amthāl) - Mashhad (Univ. 319/4).

M12. Mathematical Book (Maqāla riyāḍiyya) - Tehran (Mu`tamid 117/13).

A1. Commentary on "Concise Exposition of Elements" (Sharḥ Mujmal al-Uṣūl) - Tashkent (2572/36). Commentary on the treatise (No 308, A8) of Ibn Labbān.

A2. Gift of Astrologers (Tuḥfa al-munajjimīn) - Tashkent (461).

A3. Table Extracted from "New Gurgan Al-Zīj" (Jadwal-i mustakhraj al-Zīj-i jadīd-i Gurgānī) P - Yazd (`ulūmi). An extraction from the al-Zīj (No 816, A1) of Ulugh Beg.

A4. Astrolabe (Asṭurlāb) = Balance of Tympanums (Mīzān al-ṣafā'iḥ) P - Tehran (Mu`tamid 117/1; Univ. 2084/2).

A5. Treatise on Stars (Risāla dar nujūm) P - Tehran (Univ. Ilah. 185/2).

Ph1. Ascension of Lights and Vision (Maṭla` al-anwār wa maṭla` al-anẓār) - Mashhad (Univ. 319/3).

1081. MUHAMMAD ASHRAF YAZDI

Muḥammad Ashraf Yazdī (17th c.), from Yazd, mathematician.

See: MAMS (II 591).

M1. Commentary on "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Mashhad (5573-5574). Commentary on the work (No 1058, M1) of al-`Āmilī.

1082. MUHAMMAD IBN `ABDALLAH YAZDI

Jalāl al-Dīn Muḥammad ibn `Abdallāh Yazdī (Jalāl Banām Khān) (16-17th c.), from Yazd, scholar and astrologer.

See: MAMS (III 18, 26), PL (II 86), SSM (161).

A1. Gift of Astrologers (Tuḥfa al-munajjimīn) = Gift of Khān (Tuḥfa-yi Khānī) P - Cairo (Ṭal`at falak fārisī 1), Mashhad (26; Mawlawi 513/14), Shiraz (Milli 41), Tehran (2129; Univ. Ilah. 15/1, 110).

1083. `ABD AL-RAHMAN AL-SUSI AL-JAZULI

Abū Zayd `Abd al-Raḥmān ibn `Umar ibn Aḥmad al-Sūsī al-Jazūlī al-Bā`uqayli "Ibn al-Muftī" (d. 1611), from Sus; son of a mufti; astronomer, worked in Marrakush.

See: KZ (III 413), MAA[3] (179-180), MAMS (II 591-592), SSM (142).

A1. Collection of Flowers from the Blooming Garden (Qaṭf al-anwār min Rawḍat al-azhār) - Cairo (falak 3854, mīqāt 1052, 1124), Jerusalem (Yehuda 158/4), London (Sup. 12540), Rabat (2505-2506), Tunis (Nat. 12925). Edition: al-Jazuli [1]. Commentary on the work (No 790, A1) of al-Jadarī.

1084. MUHAMMAD AL-IDRISI

Abū Muḥammad Muḥammad ibn Muḥammad ibn Muḥammad Ḥamūda al-Idrīsī (16-17th c.), astronomer, worked in Tunis.

See: SSM (142).

A1. Garden of the Observer on the Property of the Position of Lines of Surplus of Turn (Rawḍat al-nāẓir fī kayfiyyat waḍ` khuṭūṭ faḍl al-dā'ir) - Cairo (mīqāt 1169/2). Treatise on sundials in 4 chapters containing tables for the latitude 36°51' of Tunis.

1085. SHIHAB AL-DIN AL-MIKNAṢI AL-ZANATI

Shihāb al-Dīn Aḥmad ibn Muḥammad ibn Abī'l-`āfiya al-Miknāsī al-Zanātī (1553-1616), known as "ibn al-Qāḍī" (son of a judge), from Fas; mathematician, also knowledgeable in literature and history.

See: GAL[2] (II 678-679), MAA[3] (180), MAMS (II 592); Ben Sheneb [1], [6] (EI), Deverdun [1] (EI[2]), Tuqan [1] (484). Ben Shebeb [1] lists following works of al-Zanati. mentioned by `Abd al-Qādir al-Fāsī:

HS1. Sufficient for the Researcher on Classes of Men of Arithmetic and Inheritance (Ghunyat al-rā'id fī ṭabaqāt ahl al-ḥisāb wa'l-farā'iḍ).

M1. Introduction to Geometry (al-Madkhal fī'l-handasa).

M2. [Versed Exposition of "Concise Exposition" of Ibn al-Bannā]. Exposition of the work (No 696, M1) of Ibn al-Bannā.

1086. `ABD AL-RAHIM AL-QAZWINI AL-`AJAMI

`Abd al-Raḥīm ibn `Abd al-Karīm al-Qazwīnī al-`Ajamī (d. 1617), from Qazwin, timekeeper at the Umayyad mosque in Damascus.

See: GAL (II 545), MAMS (II 592), OALT (301-302); Pingree [32] (EIr), SSM (104).

A1. Book of Al-Zīj on Heaven (Kitāb al-zīj fī'l-falak) - Berlin (5762). Description of the manuscript: Ahlwardt [1] (212-213). Edition of tables: Saliba [1] (30-32). Research: Saliba [1]. Treatise in 20 chapters plus introduction 20 chapters, and conclusion.

A2. Treatise on Fixed Stars (Risāla fī'l-kawākib al-thābita) - Cairo (mīqāt 184/3).

A3. Habtaq on Absolute Ephemerides (al-Ḥabtaq fī'l-taqwīm al-muṭlaq) - is mentioned in A1.

A4. Solutions of Planets by Principles of Ibn al-Shāṭir (Maḥlūlāt al-kawākib `alā uṣūl Ibn al-Shāṭir) = Blooming Garden which is the Solution and Abridgement of Al-Zīj of Ibn al-Shāṭir (al-Rawḍ al-zāhir bi ḥall wa ikhtiṣār zīj Ibn al-Shāṭir) - Princeton (Yehuda 3152 - under the first title), the second title is mentioned in A1.

A5. Zād al-musāfir fī ma`rifat al-awqāt wa faḍl al-dā'ir. - Manisa (1465)

1087. MUHAMMAD AL-HUNAYDI

Muḥammad al-Hunaydī (16-17th c.), astronomer.
See: SSM (91).
A1. [Tables of Ephemerides of the Sun] - Cairo (mīqāt 746/5). Tables were written in 1598.

1088. YUSUF AL-QARABAGHI

Abū Ya`qūb Yūsuf ibn Muḥammadjān al-Qārābāghī (d. 1620), from Qarabagh; pupil of Mirzajan al-Shirazi (No 1003); ahund, astronomer, knew philosophy well; worked at Samarkand and Bukhara.
See: KZ (IV 217, V 417), MAMS (II 592-593); Amin-zada [2], Semyonov [1].
A1. Treatise on Investigating the Azimuth of Qibla (Risāla dar taḥqīq-i samt-i Qibla) P - Tashkent (2422/3). Description of the manuscript: SVR (V 229-230). Treatise is dedicated to HashtarKhānid Imam Quli Khān (1611-1642).
PH1. Treatise on the Hidden (al-Risāla al-baṭiniyya) - Tashkent (2311/6). Description of the manuscript: SVR (III 345). Russian translation by Semyonov: al-Qarabaghi [1].
PH2. Lights of Wisdom (Anwār al-ḥikma) - Kabul (King 2562).

1089. BUQRAT AL-SAMARKANDI

Abū'l-Qāsim Buqrāt al-Samarkandi (16-17th c.), pupil of al-Qarabaghi (No 1088), astronomer.
See: STMI (286).
A1. Gift to the Teacher (Tuḥfat al-Ustādh) - Madras (Firuz 181). Treatise on determining the azimuth of Qibla; dedicated to al-Qarabaghi.

1090. MUHAMMAD AMIN SHIRWANI

Muḥammad Amīn ibn Ṣadr Amīn Shirwānī Mullā-Zāda (d. 1626) (mullā-zāda = son of a scholar), from Shirwan; scholar-encyclopaedist, worked in Iran and Turkey, taught at the Sultan Ahmad madrasa in Istanbul.
See: AGL (608), GAL (II 603), GAL² (II 676), MAMS (II 593), OM (II 23); Farmer [4] (66).
E1. Khaqan Ahmad-Khān Uses (al-Fawā'id al-khaqāniyya al-Aḥmad-Khāniyya) - Alexandria (fun. 53), Cairo (Taymūr 344; IV 176, VI 186), Istanbul (NO 4132/3), Mosul (121), St. Petersburg (B 896), Vienna (20/10.
A1. Selected Trues and Essence of Subtleties (Nubdha min al-haqā'iq wa zubda min al-daqā'iq) - Kabul (Matb. 76/37), Leiden (1027/2).
A2. Concise [Treatise] on Explanation of Books on Universe (Mukhtaṣar fī bayān maqālāt fi'l-`ālam) - Cairo (falak 3833/10).

1091. AHMAD BABA AL-TINBUKTI

Aḥmad ibn Aḥmad ibn Aḥmad ibn `Umar Bābā al-Takkūrī al-Ṣanhajī al-Tinbuktī al-Sūdānī (1556-1627), from Timbuktu, Sudan; theologian and historian.
See: GAL (II 618-619), GAL² (II 715-717), MAMS (II 593-594).
HS1. (Nayl al-ibtihāj bi taṭrīz al-Dībāj) = Addition (Supplement) to "Brocade" of Ibn Farhun (Dhayl "Takmilat" al-Dībāj li Ibn Farḥūn). Edition: on margins of the book Ibn Farhun [1].
Supplement to "Gilded Brocade on Prominent Theologians" (al-Dibaj al-mudhahhab fī ma`rifat a`yān `ulamā al-madhhab) of Ibrāhīm `Alī ibn Muḥammad ibn Farḥūn (d. 1369) (edition: Ibn Farḥūn [1]) containing biographies and lists of works of Muslim theologian-malikites. In the supplement, among biographies of malikites of the15-16th c., the biography and the list of works of Ibn al-Bannā (No 696). French translation of this biography and list of works: Marre [1].

1092. FARID AL-DIN AL-DIHLAWI

Abū Mullā Farīd al-Dīn Mas`ūd ibn Ibrāhīm al-Dihlawī (d. 1629), from Delhi; astronomer; worked in Lahore under Mogul Emperors Jihangir (1605-1627), Dawar-Bakhsh (1627-1627), and Shah Jihan I (1628-1657).
See: MAMS (II 594), PL (II 89), STMI (306-307).

A1. Book of Deals [Dedicated] to the Second Sahib-Qiran - Al-Zīj of Shah Jihan (Karnāma-yi Ṣāḥib-qirān-i thānī - zīj-i Shāh Jihānī) P - Dushanbe (402, 2007), Hyderabad (riyāḍa. 302), Jaipur (12, 14), Lahore (Univ. 19/2), London (372, 459/2, Ellis M 111), Oxford (2735), Rampur (1218), St. Petersburg (D 139; Univ. 97), Tashkent (4225). Description of the Tashkent manuscript: Qary-Niyazov [2] (304-306).
Al-Zīj containing introduction and 4 books: 1) calendars (Ilahi Shahjihani, Hijra, Greek, Persian, Malikī or Jalālī "Khayyām's", Samwat, Chinese - Uyghur), 2) on time and horoscopes, 3) motion of stars and planets, 4) astronomical tables.

A2. Lamp for Determining (Sirāj al-istikhrāj) P - Hyderabad (riyāḍa. 198; Osm. 1172), London (Ind. 2254/7), Oxford (1556), St. Petersburg (Nat. PNS 512/3).

A3. Al-Zīj of Rahim (Zīj-i Raḥīmī) P - Mashhad (5554).

1093. MUHAMMAD BAKIR ASTARABADI DAMAD

Sayyid Muḥammad Bāqir ibn Shams al-Dīn Ḥusaynī Astarābādī Iṣfahānī Dāmād (d. 1630) was known by the name "al-Mu`allim al-thālith" (Third Teacher - after Aristotle and al-Farabi No 180); from Astarabad, studied in Mashhad, worked in Isfahan under Safawid Shah `Abbās I, (1587-1629); died in Naja. He authored works in theology, philosophy, and other sciences.

See: GAL² (II 579), MAMS (II 594), PL (I 1136), PL² (1343-1345); Browne [6] (256-257, 428-429).

A1. Treatise on Astronomy (Risāla fi'l-hay`a) - Rampur (I 425).

1094. MUHAMMAD AL-`ALAWANI

Muḥammad ibn Aḥmad ibn Muḥammad ibn Bīrī al-Ḥanafī al-`Alawānī (d. 1631), mathematician.

See: MAMS (II 595), SSM (99); Kahhala [2] (VIII 319), OMLT (132-134).

M1. Sparkling Radiance on Operations with Polynomials and Residues (al-La'ālī al-nayyirāt fī a`māl dhawāt al-asmā` wa'l-munfaṣilāt). Commentary on M2.

M2. Sapphires of Details on "Sparkling Radiance" (al-Yawāqīt al-mufaṣṣalāt bi'l-La'ālī al-nayyirāt) - Cairo (falak 4300, riyāḍa. 99), Princeton (Yehuda 3440/1). Commentary on M1.

1095. AHMAD IBN HAYDAR

Aḥmad ibn Ḥaydar (17th c.), Ottoman astronomer.

See: MAMS (III 15), OALT (337).

A1. Comments on the Measuring [up to the Width] of a Hair (al-Ḥāshiya al-wāqi`a `alā'l-mas'ala al-sha`iriyya) - New Haven (1484). Treatise on determining the diameter of the Earth by the height of a mountain.

1096. `ABD AL-RAHMAN AL-`UMRI AL-HANAFI

`Abd al-Raḥmān ibn `Isā ibn Murshid al-`Umrī al-Ḥanafī (17th c.), Ottoman astronomer.

See: GAL (II 499), GAL² (II 513), OALT (270-273), SSM (99), TIFI (339).

A1. Gardens of Dignities (Riyāḍ al-faḍā'il) = Message on the Crescent and what is Related to the Month and the Crescent (Barā`at al-istihlāl wa mā yata`allaqu bi'l-shahr wa'l-hilāl) - Cairo (mīqāt 15, Khalīl mīqāt 4), Çorum (3013), Istanbul (NO 3152; SM Yeni Cami 989, Bağdadlı Vehbi 901, Fatih 3694, Atıf Efendi 1711, Reşid Efendi 603). Treatise on the visibility of the crescent in 3 chapters.

A2. Manāhil al-Shamar fī Manāzil al-Qamar- is quoted in OALT.

A3. Muntakhab fī ma`rifat al-Hilāl wa Dhikr al-Shuhūr al-`Arabiyya - is quoted in OALT.

A4. al-Risāla al-Murshidiyya - is quoted in OALT.

A5. Urjūza fī Ma`rifat al-Kawākib - is quoted in OALT.

1097. SALIM IBN SHEIKHAN

Sālim ibn Aḥmad ibn Sheikhān (17th c.), Egyptian astronomer.

See: GAL (II 537), SSM (99-100).

A1. Length Sufficient for Double Longitude: Explanation of the Problem of Time (al-`Arḍ al-kāfī li'l-`arḍ al-shāfī wa-huwa al-bayān `an umr al-zamān) - Berlin (2764), Cairo (Taymūr majlis 250/11). Treatise on the life span of the Earth, written in 1627.

1098. KOJA DAWUD RIYADI

Koja Dāwūd Riyāḍī (Haham Dāvīd) (17th c.), Ottoman mathematician and astronomer, worked in Thesallonika.
See: OALT (328-329).

1099. AHMAD AL-MAQQARI

Abu'l-`Abbās Aḥmad ibn Muḥammad al-Maqqarī al-Tilimsānī (d. 1632), from Tlemcen, historian; studied in Fas and Marrakech, worked in Cairo, Jerusalem, and Damascus.
See: GAL (II 381-383), GAL^2 (II 407-408), KZ (I 262, 364, II 115, IV 183, 376), MAMS (II 595), Dugat [1], Farmer [4] (66), Lévi-Provençal [2] (EI), [3] (IA).
H1. Book of Abundance in the Lands of Andalusia, and Account on its Vizier Lisan al-Dīn al-Khatib (Kitāb nafḥ al-ṭīb min ghuṣn al-Andalus al-raṭīb wa dhikr wazīrihā Lisān al-Dīn al-Khaṭīb) - many manuscripts in Algiers, Berlin, Fas, Gotha, Istanbul, Leiden, Leipzig, London, Paris, Princeton, and Rabat.
Edition: by Dozy, Dugat, Krehl, and Wright: al-Maqqarī [1], other editions - al-Maqqarī [2, 4]. English translation of the chapter on political history by Gayangos: al-Maqqarī [3]. History of Muslim Spain containing information on scholars.

1100. MUHAMMAD AL-BOSNAWI

Muḥammad ibn Mūsā al-Busnawī (d. 1636), from Bosnia, mathematician.
See: MAMS (II 595), OMLT (134-135).
M1. Treatise on Irrational Root (Risāla fi'l-jidhr al-aṣamm) - Princeton (Yehuda 2069).

1101. MUHAMMAD AL-KAWAKIBI

Muḥammad ibn Ḥasan al-Kawākibī (1609-1635) (kawākib = stars); Syrian astronomer, worked in Aleppo.
See: KZ (IV 391, 474), MAMS (II 596).
A1. Direction of the Pupil and the Necklace of Stars (Irshād al-ṭālib ilā mutaṭawwaqī al-kawākib) - Tashkent (2208).

1102. MUHAMMAD IBN MUHAMMAD

Muḥammad ibn Muḥammad (17th c.), astronomer.
See: MAMS (III 31).
A1. Essence of Astronomy of `Alī al-Qushjī (Khulāṣat al-hay'a `Alī al-Qushjī) - Baku (A 955). Revision of the work (No 845, A1) of al-Qushjī.

1103. `ALI AL-JAZULI AL-RASMUKI

`Alī ibn Aḥmad ibn Muḥammad al-Jazūlī al-Rasmūkī (d. 1639), mathematician.
See: MAMS (II 596).
M1. Commentary on Poem on Arithmetic (Sharḥ `alā manẓūma fi'l-ḥisāb) - Rabat (2438).

1104. MUHAMMAD CHELEBI (MEHMED ÇELEBİ)

Muḥammad ibn `Alī Chalabī (d. 1640), Turkish astronomer and astrologer; chief astronomer of the Ottoman Empire (munajjim bāshī).
See: MAMS (II 596, 603), OALT (275-276), OM (III 301), SSM (173).
A1. [Commentary on Al-Zīj of Ulugh Beg] T - Beirut (204). Commentary on the al-Zīj (No 816, A1) of Ulugh Beg.
A2. Strong Principles on the Predictions of Stars (Uṣūl al-iḥkām fī aḥkām al-nujūm) - Cairo (Ṭal`at falak turkī 37, 52).

A3. Determining the Calendar and Predictions of Stars (Istikhrāj-i taqwīm [wa] aḥkām-i nujūm) P - is mentioned in OM. Treatise was written in 1630.

1105. `ABDALLAH AL-SUFI

Abū'l-Ḥusayn `Abdallāh ibn `Abd al-Raḥmān ibn `Umar al-Ṣūfī (d. 1647), astronomer.
See: GAL (II 470), KZ (III 417), MAMS (II 596).
A1. Book of Introduction (Kitāb al-mudkhil) - Paris (2330/2). Book contains chapter on sizes of celestial spheres and coordinates of fixed stars.
A2. Treatise on Constellations (Risāla fī ṣuwar al-kawākib) - is mentioned in KZ.

1106. AHMAD LAHURI

Ustad Aḥmad-i Mi`mār-i Lāhūrī "Nādir al-`Aṣr" (Rarity of the Century al-Ḍarīr) (d. 1649), from Lahore; worked at the court of Mogul Emperor Shah Jihan I (1628-1657), he was the architect of Taj Mahal in Agra (mi`mār = architect), the name Nādir al-`Aṣr was given to him by Shah Jihan for building this monument), astrologer and mathematician.
See: MAMS (II 597), PL (II 14-15); Chaghatai [1] (200-201).
M1. Treatise of Architect Ahmad (Risāla-yi Aḥmad-i Mi`mār) P - Aligarh (Subh. 511/3).

1107. HAJJI KHALILALLAH SHIRAZI

Ḥājjī Khalīlallāh ibn Amanallāh ibn Baashara Khān (Rūhallāh) ibn Mulla Ruzbah Shīrāzī (d. 1649), Indian mathematician.
See: STMI (397).
M1. Commentary on the Book of Hajji Khalīl (Sharḥ-i kitāb-i Ḥajjī Khalīl) P - Rampur.
M2. Book of Hajji Khalīl (Kitāb-i Ḥajjī Khalīl) P. Commentary: M1.

1108. QASIM AL-`ALI AL-QAINI

Qāsim al-`Alī al-Qā'inī (d. ca 1650), from Qain, mathematician and astronomer.
See: MAMS (II 597), PL (II 89-90).
M1. Translation of Commentary on "Algebra and Almucabala" of al-Ṭūsī (Tarjama ba sharḥ-i Jabr wa muqābala al-Ṭūsī) P - Tehran (Univ. 1319/2). Apparently this is a commentary on the treatise (No 541, M1) of Sharaf al-Dīn al-Ṭūsī.
A1. Treatises of Qasim `Alī Qaini on the Science of Astronomy (Rasāil Qāsim `Alī Qā'inī dar `ilm-i hay`at) P - St. Petersburg (Univ. 402).
A2. Collection of Lights from the Stars and Eyes (Jāmi` al-anwār min al-kawākib wa'l-abṣār) - Madras (Firuz 21). Treatise on astronomical instruments written in 1592. In the title of the treatise, viewpoints of both ancient and medieval scholars on the nature of light are reflected: according to one of these viewpoints, rays of light issue from sources of light, particularly that of the stars. According to the second viewpoint, rays of light issue from the eyes.
A3. Treatise on the Mode of Using the Astrolabe (Risāla dar bāb-i isti`māl-i asṭurlāb) P - Tashkent (465/4), Tehran (4061/4; Sipahsalar 186, 699/1).
A4. Treatise on the Astrolabe (Risāla dar usṭurlāb) P - St. Petersburg (Univ. 403).
A5. Testing [the Astrolabe] (Imtiḥān) P - St. Petersburg (Nat. PNS 114).
A6. Explanation of Operations (Tashrīḥ al-`amal) P - Bombay (1), Madras (`Ubayd-allah), Mashhad (39).
A7. Treatise on Determining the Qibla (Risāla dar ma`rifatt-i Qibla) P - Tehran (2377/2; Malik 3304).

1109. QUTB AL-DIN AL-LARI

Quṭb al-Dīn `Abd al-Ḥayy ibn `Izz al-Dīn al-Zāhidī al-Kabīrī al-Ḥusaynī al-Lārī (16- 17th c.), from Lar, Iran; astronomer.
See: MAMS (II 598), PL (II 87-88), OALT (153-154), SSM (163), STMI (347); `Abdulla-zada [14].
A1. Solution of a Node (Ḥall-i `aqd) = Lari's Solution of a Node in Commenting on the "Ilkhanid al-Zīj" (Ḥall-i aqd-i Lārī dar sharḥ-i Zīj-i īlkhānī) P - Cairo (lughat 4349/4), Hyderabad (riyāḍa. 308; Salar hay'a 5), London

(459/1), Tabriz (3466), Tehran (Dihkhuda 101/3; Farhad 64; Malik 3226, 3334, 3377, 3403, 3583; Mishkat 1092; Sipahsalar 599/2, 686-687, 7406, 8842/1; Univ. 883, 4072, 4835). Commentary on the work (No 606, A8) of al-Ṭusī, written in 1608.

A2. Solution of Problems (Ḥall-i masā'il) P - Madras (Firuz 89), Paris (2404), Tehran (172, 4365; Malik 3220/1, 3258; Univ. 1112/1, 3234/2, Ilah. 15/2), Yazd (Saryazdi 93).

1110. ZAIN AL-`ABIDIN HUSAYNI

Zayn al-`ābidīn ibn Nūr al-Dīn Ḥusaynī Kāshānī Makkī (first half of 17th c.), from Kashani, worked in Mecca.

See: MAMS (II 598), PL^2 (1293).

M1. Abridgement of "Exposition of Euclid" (Mulakhkhaṣ Taḥrīr Uqlīdis) - Mashhad (182). Apparently, abridgement of the work (No 606, M1) of al-Ṭusī.

1111. `ABD AL-WAHHAB KAWALALI ZADA (ABDULVAHAB KAVALALIZADE)

`Abd al-Wahhāb Kawālalī-Zāda (d. 1602) from Kavala, Turkish astronomer.

See: KZ (III 388), MAMS (II 598), OALT(244-246).

A1. Treatise on the Sine [Quadrant] (Risāla al-jayb) T - Ankara (İl Halk 2260/1), Damascus (Zahiriyya 10320, 6888), Diyarbakır (1731/1), Istanbul (SM Esad Efendi 3748/24, Mihrişah Sultan 327/2, Bağdadlı Vehbi 2123/4; Arkeoloji Müzesi 586/1), Manisa (5828/6, 6717/2, 2976/13). is mentioned in KZ as book in 10 chapters and introduction.

A2. Rub` Tahtası Risalesi. - is quoted in OALT.

A3. Sharḥ al-Nujūm al-Ẓāhirāt fi'l-`Amal bi Rub` al-Muqanṭarat - is quoted in OALT.

1112. MUHAMMAD-SADIQ AL-ISFAHANI AL-AZADANI

Mīrzā Muḥammad-Sādiq ibn Muḥammad-Sāliḥ Zubayrī al-Iṣfahānī al-āzādānī (1609-1651), from Azadan near Isfahan; poet, historian and mathematician; worked in Delhi as historiographer at the court of Mogul Emperor Shah Jihan I (1628-1657), later in Jihanghir-nagar (Dhaka).

See: AGL (532-535), GAL^2 (II 588), MAMS (II 598-599), PL (I 125-126, II 139-140, 359-360), PL^2 (429-431), STMI (608).

E1. Testimony of Sadiq (Shāhid-i Ṣādiq) P - Berlin (96), Calcutta (653, 1365-1366; Buhar 468; Madrasa 108-109), Lahore (Univ.), London (1005/2, 7775/1; Egerton 1015; Ind. 2226-2227), Patna (913), Tehran (770, Mishkat 232). Description of the Patna manuscript: `Abd al-Muqtadir [1] (151-169). English translation of two parts "More Precise Forms of Names of Cities" (Taḥqīq al-i`rāb fī asmā' al-bilād) and "Calendar of Countries" (Taqwīm al-buldān): al-Isfahani [1].

M1. Treatise of Sadiq on Arithmetic (Risāla-yi Ṣādiqiyya dar ḥisāb) P - Tashkent (10864/4).

M2. Lights of Foundation (Anwār-i mu`tamidiyya) P - Tehran (Malik 3273).

1113. NIZAM AL-DIN GILANI

Ḥakīm al-Mulk Niẓām al-Dīn Aḥmad Gilānī (17th c.), from Gilan, physician and scholar-encyclopaedist, worked in Golconda, India, under `Abdallah Qutb-Shah (1626-1672).

See: MAMS (III 37), PL (II 160-161, 360).

E1. Collection of Hakim al-Mulk Nizam al-Dīn Ahmad Gilani (Majmū`a-yi H`akīm al-Mulk Niẓām al-Dīn Aḥmad-i Gilānī) P - Berlin (45, 600), Hyderabad (riyāḍa. 306).

M1. Joints of Fingers (`Aqd al-anāmil) - Hyderabad (riyāḍa. 39). Treatise on finger arithmetic.

1114. MIR MUHAMMAD HASHIM AL-`ALAWI AL-HUSAYNI

Sayyid Mīr Muḥammad Hāshim ibn Qāsim al-`Alawī al-Ḥusaynī (d. 1651), mathematician.

See: GAS (V 113), MAMS (II 599, III 39), STMI (411).

M1. Commentary on "Exposition of Euclid" (Sharḥ Taḥrīr Uqlīdis) = Commentary on "Exposition of Elements of Geometry and Arithmetic" (Sharḥ Taḥrīr uṣūl al-handasa wa'l-ḥisāb) - Aligarh (Azad. Sul. 162/22), Patna (2425, 2435), Rampur (39-43). Commentary on the work (No 606, M1) of al-Ṭusī.

1115. AHMAD AL-DAWWARI

Aḥmad ibn Yaḥyā ibn Sa`dī al-Dawwārī (d. 1651), Yemeni scholar-encyclopaedist.
See: GAL^2 (II 559), MAY (44), SSM (133).
E1. Noble Aim (al-Maqṣad al-ḥasan) - Cairo (Taymūr riyāḍa. 353/2 - a fragment on surveying).

1116. `ALI AL-TAWASHI

Nūr al-Dīn `Alī ibn `Abdallāh al-Tawashī (17th c.), Yemeni astronomer.
See: MAMS (III 9), MAY (41), SSM (134).
A1. Key to the Mysteries in the Science on Rotating Celestial Sphere (Miftāḥ al-asrār fī `ilm al-falak al-dawwār) - Cairo (majlis 709/3), Princeton (Garr. 1016). Description of the Princeton manuscript: Hitti, Faris and `Abd al-Malik [1] (320).

1117. `ABDALLAH AL-DAWWARI

`Abdallāh ibn Ḥamza al-Qāḍī al-Dawwārī (17th c.), Yemeni astronomer.
See: MAY (60), OALT (592-593) , SSM (134).
A1. (Bulghat al-muqtāt fī ma`rifat al-awqāt) - Cairo (falak 3764/2), Sana'a (Grand Mosque majlis 98).

1118. `ABD AL-QADIR AL-NABTITI AL-QADIRI

`Abd al-Qādir ibn Maḥmūd al-Nabtītī al-Qādirī (17th c.), from Nabtit, Egypt; astronomer.
See: GAL (II 477), OALT (279), SSM (102).
A1. [Almanac with Syrian months] - Cairo (mīqāt 108/1).

1119. `ALI AL-NABTITI

`Alī ibn `Abd al-Qādir al-Nabtītī al-Azharī al-Ḥanafī (d. 1650), son of al-Nabtītī al-Qādirī (No 1118); astronomer, worked in Daghistan.
See: GAL (II 217), GAL^2 (II 458), MAMS (II 599), OALT (286-287), OMLT (136), SSM (102, 105).
M1. Shining Full Moons on Operation of Iteration (al-Budūr al-mushriqāt fī a`māl al-munāsakhāt) - Cairo (`ulūm 22621).
A1. Granted [by Allah] Conquests - Commentary on "Treatise on Fath al-Dīn on Operations with the Sine [Quadrant]" (al-Futūḥāt al-wahbiyya fī sharḥ al-risāla al-Fatḥiyya fi'l-`amal bi['l-rub`] al-mujayyab) - Berlin (IGMN II. 6), Cairo (falak 17238, mīqāt 260/1, 995, 1029, Fāḍil mīqāt 171/1, majlis 42/3), Istanbul (Univ A.Y. 3232/14), Konya (1042/1, Mevlana Müzesi 6144/1), St. Petersburg (B 814/2, 2695/3). Description of the Berlin manuscript: Ruska and Hartner [1] (176-177). Commentary on the work (No 873, A7) of Sibṭ al-Maridīnī.
A2. Answer to a Question on Approximate Operations [of Timekeeping] (Ijābat al-su'āl bi taqrīb al-a`māl) - Istanbul (SM Izmirli 758/18), Mahachqala (187/5, 1183/4), Princeton (Yehuda 328/1). Treatise was written for Nur al-Dīn Ahmad al-Lādhiqī "from the land of Shamkhal", namely Daghistan.

1120. MAHMUD AL-JAWNPURI

Maḥmūd al-Jawnpurī (1606-1651), scholar, Indian natural-philosopher from Jawnpur.
See: GAL (I 420, II 621).
A1. Sun of Return (Shams-i-Bāzeghā). Edition: al-Jawnpuri [1]. Research: `Abdi [1] (Moon-spots, critique of the Ptolemaic system).

1121. MAHMUD AL-AWFI AL-HIJAZI

Maḥmūd ibn Aḥmad al-Awfī al-Ḥijāzī (d. 1635), from Saudi Arabia, astronomer.
See: GAL^2 (II 483), MAA (201), MAMS (II 600), OALT (276-279), SSM (109).
M1. [Commentary on Poem on Algebra] - Cairo (riyāḍa. 1038). Commentary on the poem (No 521, M1) of Ibn al-Yāsamīn.

A1. Treatise on Explanation of the Method of Compiling the Calendar (Risāla fī sharḥ kayfiyya istikhrāj al-taqwīm) - - Baghdad (Mathaf al-Iraqi 5510), Berlin (5778), Cairo (mīqāt 977/2, 1082/8, Ṭal'at majlis 582/1b, mīqāt 227/2, Zaki 260, Ḥalīm mīqāt 18), Diyarbakır (917/1), Gotha (1430), Istanbul (AS 2690, SM Esad Efendi 1970/2, Yazma Bağışlar 1348/3, Laleli 2135/5, Hamidiye 843; Kandilli 88/2; NO 2951), Rome (Vat. Sbath 794). In addition to those stated above, 18 manuscript copies are mentioned in OALT. Description of the Berlin manuscript: Ahlwardt [1] (218).

A2. Mirror of Wonderful in Operations with the Absent Sine (Mir'āt al-`ajā'ib fi'l-`amal bi'l-jayb al-gha'ib) - Alexandria (Mun. D 4865), Ankara (Milli Kütüphane A-3084/5), Cairo (mīqāt 1082/4, 8, Azhar 7658), Çorum (5557/5), Istanbul (Univ. AY: 2895/1; Kandilli 13)

1122. `ISA AL-SHAMGHADI

`Isā al-Shamghadī (Shamgadinskiy (17th c.), born in Shamghada in Daghistan; mathematician and philosopher; studied in Daghistan, Shirwan, and Iran; was pupil of al-`Āmilī (No 1058); he acquainted the scholars of Daghistan with the "Essence of Arithmetic" (No 1058, M1).

See: MAMS (II 600); Saidov [1] (120).

1123. ISMA`IL AL-SHINAZI

Ismā`īl al-Shināzī (Shinazinsky) (17th c.), from Shinaz near Rutul in Daghistan, pupil of al-Ghuludī (No 1067) and al-Shamghadī (No 1122); mathematician, astronomer, philosopher, and constructor of astrolabes.

See: MAMS (II 600); Saidov [1] (120).

1124. IBRAHIM AL-JAHHAF

Shārim al-Dīn Ibrāhīm ibn Yaḥyā al-Mahdī al-Jaḥḥāf al-Ḥasanī al-Qāsimī al-Ḥabūrī (1583-1655), Yemeni mathematician.

See: GAL (II 567), MAMS (II 600), MAY (56-57), OMLT (136-137), SSM (133).

M1. Great Method (al-Ṭarīqa al-jalīla) = Method in Arithmetic (al-Ṭarīqa fi'l-ḥisāb) = Method of Reckoners in the Art of Scribes (Ṭarīqat al-ḥussāb fī ṣinā`at al-kuttāb) = Method of Jahhaf (Ṭarīqat al-Jaḥḥāf) - Cairo (falak 4309/1, majlis 705/11), Rome (Vat. 1047/4, 1078/7).

M2. Commentary on "Useful Key in the Science on Inheritance" (Sharḥ Miftāḥ al-fā'id fī `ilm al-farā'iḍ) - Rome (Vat. 1134/2). Commentary on a treatise (No 560, M1) of al-Uṣayfirī.

1125. AHMAD AL-HUSAYNI AL-YAMANI

Aḥmad al-Ḥusayni al-Yamanī (17th c.), Yemeni mathematician.

See: MAMS (III 16), MAY (57), OMLT (236).

M1. Treatise on Directorial Proof of Properties of Digits of Numbers (Risāla fī bayān ḍābita [fī kayfiyya] `uqud al-`adad) - Baku (B 512/38, 675\16, DD 75), Cairo (Ṭal`at majlis 635/10), Istanbul (SM Esat 3673/5).

M2. [Mathematical Treatise] - Zaqataly (80/1).

1126. `ABD AL-RAHMAN AL-ASHKARI AL-TULUNI

`Abd al-Raḥmān ibn `Abdallāh al-Ashkārī al-Ṭūlūnī (16-17th c.), imam of Tulunid mosque in Cairo.

See: GAL (II 366, 480), GAL² (II 493), MAMS (II 601, III 8), OALT (302-303), SSM (101).

A1. Obtaining the Use and Limit of Height in the Installation of Gnomons and Construction of Quadrants (Taḥṣīl al-intifā` wa ghāyat al-irtifā` fī waḍ` al-maqāyīs wa waḍ` al-arbā`) - Cairo (mīqāt 445, Fāḍil mīqāt 21, Taymūr riyāḍa. 161/2), Istanbul (SM Laleli 2703, Hafid Efendi 208/1, Hacı Maḥmūd 5688/4; Millet, Ali Emiri Arabi 2771/1). Treatise in 89 chapters written in 1625.

A2. Bright Stars on the Position of Thread Ruler (al-Kawākib al-ẓāhira fī waḍ khayṭ al-musātara) - Cairo (mīqāt 982), Princeton (Mach 5012). Treatise on a special kind of sundial.

A3. Risāla fī Kayfiyyat `Amal al-Basīṭa. - Cairo (18, mīqāt 421, felek-riyāḍa 3991, 3995, Fāḍil mīqāt 95)

1127. 'ABD AL-RAHMAN IBN UTHMAN (ABDURRAHMAN B. OSMAN)

`Abd al-Raḥmān ibn `Uthmān (17th c.), Ottoman astronomer, worked in Cairo. Author of the Turkish translation of the Ulugh Beg Zīj (No 816, A1).

See: MAMS (III 8), OALT (345-346); Adnan [1] (169).

A1. [Revision of the Ulugh Beg Zīj] - Cairo (Ṭal`at falak Turkī 33), Istanbul (Univ. hay'a 19, TY, 44-45, 6551), Konya (Yusuf Ağa 9887/14). Revision of zīj (No 816, A1), Ulugh Beg.

1128. DARWISH `ALI MURWARRID

Darwīsh `Alī ibn Mīrzā `Alī ibn Khwāja Maḥmūd Murwarrid (17th c.), philosopher and musician at the court of the Hoshtarhanid ruler of Transoxania, Imam Quli Khān (1611-1642).

See: MAMS (II 601), PL (II 415).

Mu1. Treatise on Music (Risāla-yi mūsīqī) P - Tashkent (449). Russian translation of chapters I-II by Rajabov: Darwish `Alī [1]. Exposition and research: Semyonov [5]. Treatise in 12 chapters.

1129. `ABDALLAH AL-TULUNI

`Abdallāh ibn `Abd al-Raḥmān ibn `Abdallāh al-Ṭūlūnī (17th c.), Ottoman astronomer; son of al-Ashkārī al-Ṭūlūnī (No 1126).

See: OALT (437-438), SSM (101).

A1. Opening Doubts and Explanation of Hidden Mystery on Operations with the Circle of Absent Men and with the Plane [Sundial] Possessing Latitudes (Kashf al-rayb wa bayān al-sirr al-maghmūd fī'l-`amal bi dā'irat rijāl al-ghayb wa bi'l-basīṭa dhāt al-`urūḍ) - Cairo (Ṭal`at majlis 811/6). Research: King [9a].

A2. Treatise on the Mode of the Construction of the Plane [Sundial] and on What Exists on It from Arcs of `Asr and Simple [Hours] (Risāla fī kayfiyyat `amal al-basīṭa wa mā tashtamilu `alayhi min qisiy al-`aṣr wa'l-basīṭa) - Cairo (mīqāt 18, 421, Fāḍil mīqāt 95). Description of the first manuscript: Kunitzsch [1] (64-65).

1130. `ABD AL-RAHMAN AL-AZHARI

`Abd al-Raḥmān ibn `Abdallāh al-Kātib al-Azharī (17th c.), Egyptian astronomer.

See: SSM (101).

A1. Joy of Observers on what is Related to the Knowledge of the Construction of Circle of Countries and Surplus of Turn (Bahjat al-nāẓir fīmā yata`allaqu bi ma`rifat dā'ira al-buldān wa faḍl al-dā'ir) - Cairo (mīqāt 173/8).

1131. `ABD AL-RAHMAN AL-WAFAI AL-KATIB

Abu'l-Khayr `Abd al-Raḥmān al-Wafā'ī al-Kātib (17th c.), timekeeper at the Ghawriyya madrasa in Cairo; astronomer.

See: OALT (333), SSM (101).

A1. Partial Treatise on Equation of a Solar Degree (al-Risāla al-juz'iyya fī ta`dīl al-daraja al-shamsiyya) - Cairo (Fāḍil mīqāt 180/1, 184/2).

A2. Explanation of Hidden Mystery on Drawing Circle of Mihrabs (Bayān al-sirr al-ghāmiḍ fī rasm dā'irat al-maḥārīb) - Cairo (mīqāt 760/2).

1132. MUHAMMAD AL-KUTAMI

Abu Bakr Muḥammad al-Kutāmī (17th c.), Egyptian mathematician.

See: OALT (279-280), SSM (101).

M1. Guidebook on Difference in Reckoning 'Izdilāf' (Kitāb al-is`āf `ala'l-ikhtilāf fī ḥisāb al-izdilāf) - Cairo (falak 4006/1). On reckoning "izdilaf" see TIFI (85-87).

1133. MUHAMMAD FADIL IBN `ABD AL-SHAKUR

Muḥammad Fāḍil ibn `Abd al-Shakūr (17th c.), Indian astronomer, worked at the court of Mogul Emperor Shah Jihan I (1628-1657).

See: MAMS (II 601), PL (II 89), STMI (326).

A1. Collection of Virtues (Majma` al-faḍā'il) P - Oxford (1557). Astronomical and astrological treatise in 3 chapters, dedicated to Emperor Shah Jihan I.

1134. SHIHAB AL-DIN AL-QALYUBI

Shihāb al-Dīn Aḥmad ibn Aḥmad ibn Salāma al-Qalyūbī (d. 1659), Egyptian physician and astronomer.

See: AGL (714), GAL (II 478-479), GAL² (II 492-493), HMA (II 303), KZ (V 153, VI 74), MAMS (II 601-602), OALT (297-299), SSM (103); Brockelmann [10] (EI, EI²), O. Rescher [3].

M1. Treatise on the Science of Letters and Magic Squares (Risāla fī `ilm al-ḥarf wa'l-wafq) - Gotha (1269).

A1. Guide from Fallacy in Timekeeping and Determining the Qibla without Instrument (Hidāya min al-ḍalāla fī ma`rifat al-waqt wa'l-Qibla min ghayr āla) - Berlin (5706), Cairo (falak 4622, mīqāt 203, 309, 494, 984, Fāḍil mīqāt 174/1, 215, Ṭal`at mīqāt 130, Taymur riyāḍa. 56/1, 98), Istanbul (Topkapı Hazine 469; SM: Atıf Efendi 1723), Konya (Yusuf Ağa 9887/5), Princeton (Yehuda 4582).

A2. Definition of Time, the Qibla, the Meridian, and the Azimuth of Qibla (Ta`rīf al-waqt wa'l-Qibla wa'l-zawāl wa samt al-Qibla) - Tehran (Mahfuz 33).

A3. Introduction on Four Seasons, Times of Prayers, End of Night, and the Direction of the Qibla without Instrument (Muqaddima fī'l-fuṣūl al-arba`a wa awqāt al-ṣalawāt wa ākhir al-layl wa jihat al-Qibla bi ghayr āla) - Cairo (falak 4235), Gotha (1452-1453).

A4. Treatise on Times, Seasons, and Rythms (Risāla fī'l-awqāt wa'l-mawāṣim wa'l-tawkī`āt) - Cairo (Ṭal`at mīqāt 132). Almanac for prayer times.

A5. Jadwal Asmā' al-Kawākib wa Maṭāli`ihā wa Ab`ādihā wa Maqādīrihā wa Darajātihā - Istanbul (SM Reisülküttab 582/2)

A6. Risāla fī `Ilm al-Mīqat - Cairo (falak riyāḍa 4235)

G1. [Treatise] on the Knowledge of the Names of Cities, their Longitudes, and Declinations (Fī ma`rifat asmā` al-bilād wa aṭwālihā wa inḥirāfihā) - Princeton (Garr. 756).

E1. Book of Stories, Miracles, Marvels, Subtleties, Rarities, Useful, and Precious (Kitāb ḥikāyāt wa gharā'ib wa `ajā'ib wa laṭā'if wa nawādir wa fawā'id wa nafā'is).

Editions: al-Qalyubi [2-3]. English translation by Nassau Lees and Kabīr al-Dīn: al-Qalyūbī [1]. Research: O. Rescher [11]. Scientific work on nature written in an entertaining style.

1135. MUHAMMAD AL-HUSAYNI

Muḥammad Mu`min ibn `Alī al-Ḥusaynī (17th c.), mathematician.

See: MAMS (II 602).

M1. Selected Arithmetic (Muntakhab al-ḥisāb) P - Mashhad (7127).

Me1. Treatise on Weights and Magnitudes (Risāla dar awzān maqādīr) P - Mashhad (5322, 8036), Shiraz (Aḥmad.), Tehran (Univ. 1257/28, 4325/2), Yazd (Umumi). Treatise was written in 1621.

1136. IBN YALB

Ibn Yalb (17th c.), Indian mathematician.

See: MAMS (III 21).

M1. Mirror of Arithmetic (Mir`āt al-ḥisāb) P - Tashkent (6030/ 2, 6230/1). Research: Muzafarova [10, 12]. Revision of the algebraic treatise "Vijaganita" of Indian mathematician Bhaskara II (12th c).

1137. MUHAMMAD AL-SAKHRI AL-HARRI

Muḥammad al-Sakhrī al-Ḥarrī (17th c.), Egyptian astronomer.

See: SSM (102).

A1. Treatise on Operations with the `Ajam Tympanum (Risāla fī'l-`amal bi'l-ṣafīḥa al-`ajamiyya) - Cairo (mīqāt 912), Paris (2535/2). Treatise in 15 chapters, written in 1629.

"`Ajam" is the Arabic term for non-Arabs, in this case, apparently, Spanish. The instrument that is described in the treatise has four tympans and a cone bearing an alidade for solving problems of spherical astronomy.

1138. NUR AL-DIN IBN MUHAMMAD

Nūr al-Dīn ibn Muḥammad (17th c.), Ottoman astronomer, worked under Sultan Osman II (1618-1622).
See: STMI (341).
A1. Calendar for Qayyum calculated by Nur al-Dīn ibn Muḥammad (al-Taqwīm al-Qayyūm min ḥisāb Nūr al-Dīn ibn Muḥammad) - Cambridge (261 - incomplete). Almanac for the Solar year beginning with 22 March 1619.

1139. KHIDHR KHALIFA AL-TABARI (HIZIR HALİFE AL-TİREVİ)

Khiḍr Khalīfa al-Ṭabarī (17th c.), Turkish mathematician, worked under Sultan Murad IV (1623-1540).
See: MAMS (II 602), OM (III 266-267), OMLT (151-152).
M1. Island of Figures (Jazīrat al-arqām) - is mentioned in OM.
12 chapters: 1) addition, 2) substraction, 3) multiplication, 4) mediation, 5) duplication, 6) division, 7-9) problems of taxes, 10-11) exchange of gold for piasters and vice versa, 12) Arabic siyaq and Indian figures.

1140. IBN `ASHIR

Ibn `Āshir (17th c.), astronomer.
See: MAMS (II 602).
A1. Treatise on the Sine Quadrant (Risāla fi'l-rub` al-mujayyab) - Vienna (Acad. 330). Treatise was written in 1625.

1141. MUHAMMAD KHAZINI

Muḥammad Khāzinī (17th c.), astronomer.
See: MAMS (II 602).
A1. Abridgement of "Almagest" (Mukhtaṣar al-Majisṭī) - Mashhad (5387). Treatise was written in 1632.

1142. IBRAHIM AL-SHIRAZI

Ibrāhīm ibn Zayn al-Dīn al-Shīrāzī (17th c.), from Shiraz, astronomer, worked in Mecca.
See: SSM (161).
A1. [Treatise on Heliacal Appearance at Mecca in 1041 h.] - Cairo (mīqāt 59/1). Treatise was written in 1632.

1143. MUHAMMAD MULLA CHELEBI AL-AMIDI (MOLLA ÇELEBİ AL-AMİDİ)

Mawlānā Muḥammad Mullā Chelebī al-Āmidī, (Molla Çelebi) (d. 1656), Turkish mathematician and astronomer, worked in Syria.
See: GAS (V 115), MAMS (II 603), OALT (291-294), OMLT (140-141), OM (III 302-303), SSM (164).
M1. Super-commentary on "Substantial Propositions" (Ḥāshiya `alā Ashkāl al-ta`sīs) - Istanbul (SM Şehit 1725/2). The complete list is given in OMLT. Super-commentary on the work (No 655, M1) by al-Samarkandi.
A1. Treatise on the Art of Determining Ephemerides (Risāla fī ṣinā`at istikhrāj al-taqwīm) - Cairo (falak 4297/2, Ṭal`at mīqāt 89, Taymur riyāḍa. 324 - anonymous). Treatise in 28 chapters.
A2. Super-commentary on Commentary on "Compendium" (Ḥāshiya `alā sharḥ al-Mulakhkhaṣ) - is mentioned in OM. Super-commentary on commentary (No 808, A1) by al-Rumi on the work (No 547, A1) of al-Jaghmīnī, written in 1656.
A3. As'ila. - Istanbul (SM Esad Efendi 1143/19, Hacı Beşir Ağa 666/19).
A4. Radd wa Qabul - Istanbul (SM Esad Efendi 1143/20, Hacı Beşir Ağa 666/20)
A5. Risāla fī manāzil al-qamar- Istanbul (Arkeoloji Müzesi 591/3)

A6. Risāla fī sina`at istikhrāj al-taqwīm - Cairo (falak-riyāḍa 4297/2, Talat-mīqāt 89, Falak Nujum-Turkī 39, Taymur -riyāḍa 324), Istanbul (SM Hafīd Efendi 455/1, Fatih 5308/14, Lala İsmail 278/1)

1144. `ABDALLAH IBN SALAH DA`IR

`Abdallāh ibn Ṣalāḥ Dā`ir (17th c.), Yemeni historian and astronomer.

See: GAL (II 5 28), GAL^2 (II 635), MAY (43).

A1. [Table for Timekeeping by the Stars] - Berlin (5720).

1145. MUSTAFA HAJJI KHALIFA (KATİP ÇELEBİ)

Muṣṭafā ibn `Abdallāh Kātib Chalabī Ḥājjī Khalīfa (1608-1657), was born, lived and died in Istanbul. Turkish historian, and geographer.

See: AGL (601-622), GAL (II 563-565), GAL^2 (II 635-637), GOW (195-203), MAMS (II 603-604) , OALT (295-297), OMLT (141), OM (III 124-131), PL (II 140-141), PL^2 (432-435); Adnan [1] (115-132), Gökbilgin [2], Gökyay [1], [2] (IA), [3], [4] (EI^2), Menzel [2] (EI), Mordtmann [4] (EI), Ülken [5], Yaltkaya [2], OCLT (85-98).

Memorial collection: "Ḥājjī Khalīfa" É[1].

HS1. Opening Doubts about Titles of Books and Names of Sciences (Kashf al-ẓunūn fī asāmī al-kutub wa'l-funūn). Many manuscripts in Fas, Istanbul, London, Munich, Paris, Patna, Rome, St. Petersburg and other cities. Edition by Flügel with Latin translation: Ḥājjī Khalīfa [5] (KZ), other editions: Ḥājjī Khalīfa [7-8]. Research: `Abdukhalīlov [1], Matviyevskaya [21] (95-96), Wiedemann [72]. Appendix: Bağdadlı [1]. Classical bio-bibliographical work on Arabic literature.

M1. Beauty of Gift (Ḥusn al-hadiyya) - is mentioned in KZ in his autobiographical treatise H2. Algebraic treatise - commentary on (No 845, M1) of al-Qushjī. The complete list is given in OMLT.

A1. Holy Inspiration from Holy Generosity (al-Ilhām al-muqaddas min al-fayḍ al-aqdas) - Bursa (Haraççıoğlu 1213/2), Çorum (3018/14), Erzurum (Atatürk Univ. ASL. 136), Istanbul (NO 4075/3, 4991/2; SM Hamid. 993/2, Laleli 694/4, Mahmud 1938/2, Reisülküttab 1182/14, Lala İsmail 694, Hacı Mahmud 6515, Selim Ağa 725/2, Univ. TY. 9598/2), Kastamonu (281/4), Manisa (6591/6). Photo-reproduction of the Hamidiye manuscript: Ḥājjī Khalīfa [10] (165-176), Turkish translation by Şehsuvaroğlu: Ḥājjī Khalīfa [10] (149-163). Research: Şehsuvaroğlu [1]. Answer on three astronomical questions of al-`Āmilī (No 1058).

G1. Picture of the World (Jihān-numā). Edition: Ḥājjī Khalīfa [2]. Latin translation by Norberg: Ḥājjī Khalīfa [4]. Research: A.A.Papazyan [1], Selen [1], Taeschner [1] (57-59).

G2. Gift to Great Nobles about Naval Campaigns (Tuḥfat al-kibār fī asfār al-biḥār). Editions: Ḥājjī Khalīfa [1]. English translation: Mitchell [1].

H1. Calendar of Dates (Taqwīm-i tawārikh) T. Edition: Ḥājjī Khalīfa [3]. (Sullam al-wuṣūl ilā Tabakat al-Fuhūl) - biographical dictionary; being edited by Ihsanoğlu. Research: Gökbilgin [1].

H2. Balance of Law in the Choice of the More Merited (Mīzān al-ḥaqq fī ikhtiyār al-aḥaqq). Edition by Abu'l-Ziya: Ḥājjī Khalīfa [6]. English translation by Lewis: Ḥājjī Khalīfa [9].

1146. AHMAD AL-ABBAR

Aḥmad ibn Muḥammad ibn Mūsā Ḥamdūn al-Abbār (1593-1660), khatib in the al-Andalus mosque in Fas; mathematician.

See: GAL^2 (II 707), MAA^3 (180-181), MAMS (II 604).

M1. Removal of the Cover from General Payment at Disasters (Kashf al-riwāq `an ṣarf al-jāmi`a ilā'l-awāq) - Fas (Zawiya 26a), Rabat (457/2, 539/2). Treatise on insurance.

1147. IBRAHIM HUSAYN AL-SHABRUDI

Ibn Ḥajjī Ibrāhīm Ḥusayn al-Sharīf al-Shabrūdī (17th c.), Iranian mathematician.

See: STMI (398).

M1. Gift to the Khān. Commentary on the "Essence of Arithmetic" (Tuḥfa-yi khānī Sharḥ Khulāṣat al-ḥisāb) P - Hyderabad (Salar riyāḍa. 1).

Commentary on the work (No 1058, M1) of al-`Āmilī, written in 1636.

1148. SHAH SHUJA`

Shāh Shujā` (17th c.), Mogul prince, son of Mogul Emperor Shah Jihan I (1628-1657), pupil of Mawlana Shah Beg; philosopher.
See: STMI (506).
PH1. Treatise of Shah Shuja` on Philosophy (Risāla-yi Shāh Shujā` dar ḥikma) P - Hyderabad (Salar falsafa 11).

1149. MUHAMMAD AL-ZABIDI

Muḥammad ibn `Abd al-Laṭīf al-Zabīdī al-Thābitī (17th c.), Yemeni astronomer, born in Syria, lived in Zabid, Yemen.
See: MAMS (III 26), MAY (43-44).
A1. Treatise on Times of Season; Seasons and Solar Degrees (Risāla fī'l-awqāt al-zamāniyya wa fuṣūl wa darajāt al-shams) - Tarim (Ibn Sahl 296/3).
A2. [Prayer tables for Yemen] - Algiers (1485/3), Berlin (5769), Rome (Vat. 962), Sana'a (Grand Mosque majlis 27).

1150. ABU'L-HASAN HUSAYNI

Abū'l-Ḥasan ibn Muḥammad Bāqir ibn Ghiyāth al-Dīn `Alī Ḥusaynī (d. 1676), astronomer.
See: STMI (284).
A1. Removing the Veil from the Science of Astrolabe (Kashf alhijāb fī `ilm al-asṭurlāb) - Aligarh (Azad. Habib 44/9).

1151. MUSTAFA AL-BULAWI

Muṣṭafā ibn Aḥmad ibn Muṣṭafā al-Bulawī (d. 1679), mathematician.
See: MAMS (II 604), OMLT (147-148).
M1. Super-commentary on Commentary on "Propositions of Substantialization" (Ḥāshiya `alā sharḥ Ashkāl al-ta`sīs) - Berlin (5943). Super-commentary on commentary (No 808, M2) by al-Rūmī on the work (No 655, M1) of al-Samarkandī.

1152. AL-HASAN AL-SHARJI

Al-Ḥasan ibn `Abdallāh al-Sharjī or al-Sarḥī (17th c.), Yemeni astronomer.
See: MAY (44-45).
A1. Sufficient for the Aim of the Aspirant and Useful for the Reckoner (Bughyat al-Ṭālib al-mustafīd wa mughnī al-ḥāsib al-mufīd) = Al-Zīj of al-Sarhi (al-Zīj al-Ṣarḥī) - Sana'a (al-Hatimi).

1153. `ALI AL-KHALKHALI

Shams al-Dīn `Alī al-Ḥusaynī al-Khalkhālī (17th c.), mathematician and astronomer, pupil of al-`Āmilī (No 1058).
See: MAMS (II 604-605), STMI (360, 420).
M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Calcutta (1470), Hyderabad (Said riyāḍa. 4; Salar riyāḍa. 18), London (Ind. 763), Manchester (355), Najaf (Ayatallah 74), Patna (2472), Peshawar (1766), Princeton (Yehuda 808, 3184), Rampur (46), Tashkent (7235/1). Commentary on the work (No 1058, M1) of al-`Āmilī, written in 1641.
M2. Abridgement of Rules of Arithmetic (Talkhīṣ qawā`id al-ḥisāb) - Hyderabad (majlis 73/1).
A1. Commentary on the "Explanation of Celestial Spheres" (Sharḥ Tashrīḥ al-aflāk) - Aligarh (Azad. `Abd al-Ḥayy 637/77), Hyderabad (riyāḍa. 173), Patna (2472/1). Commentary on the work (No 1058, A1) of al-`Āmilī, written around 1630.

1154. IBRAHIM HUSAYN AL-SHABRUDI

Ibrāhīm Ḥusayn al-Sharīf ibn al-Ḥājj al-Shabrūdī (17th c.), Iranian mathematician.
See: MAMS (III 20).

M1. Essence of Arithmetic (Khulāṣat al-ḥisāb) - Mosul (Hajjiyat 70). Revision of treatise (No 1058, M1) of al-`Āmilī.

M2. Gift to Khān - Commentary on "Essence of Arithmetic" (Tuḥfa khānī - Sharḥ-i Khulāṣat al-ḥisāb) P - Hyderabad (Salar riyāḍa. 1). Commentary on the treatise (No 1058, M1) of al-`Āmilī.

1155. RAMADAN AL-JAZAIRI

Ramaḍān ibn Abī Ḥurayra al-Jazā'irī al-Qādirī (Ramazan Efendi) (17th c.), from Algeria, Ottoman mathematician.

See: GAL (II 547), GAL² (II 596), MAMS (II 605, 637), SSM (162), STMI (415), OMLT (155-153).

M1. Solution of "Essence [of Arithmetic"] for Supreme People (Ḥall al-Khulāṣa li ahl al-riyāsa) - Baghdad (Muz. 8558), Cairo (falak 3765, riyāḍa. 657, 666, Fāḍil riyāḍa. 9, Taymur riyāḍa. 129), Calcutta (1471), Hyderabad (Osm. 105a), Princeton (Yehuda 1166, 2827, 3390, 4777, 5432), Rampur (I 427).
Commentary on the work (No 1058, M1) of al-`Āmilī, written in 1665.

M2. Commentary on the "Essence of Arithmetic" (Sharḥ àlā Khulāṣat al-ḥisāb li'l-`Āmilī) -Baku (b 1467), Beirut (240), Calcutta (1471), Istanbul (SM Fatih 3446, Laleli 2135/3, Selim 734), Peshawar (1694, 1735), St. Petersburg (B 818), Vienna (1300).
Commentary on the same work (No 1058, M1) of al-`Āmilī, written in 1681.

M3. Treatise on Arithmetic (Risāla fi'l-ḥisāb) - Istanbul (NO 2979).

1156. SHIHAB AL-DIN IBN TAJ AL-DIN

Shihāb al-Dīn Aḥmad ibn Tāj al-Dīn (17th c.), Ottoman astronomer.

See: GAL² (II 538), MAMS (II 605), SSM (104).

A1. Burning Lamp on Compiling Al-Zījes (al-Sirāj al-wahhāj fī `amal al-azyāj) - Leiden (2538). Treatise was written in 1661.

A2. [Poem on the Universal Instrument] - Cairo (Ṭal`at mīqāt 94/1. Poem on the instrument described by al-Rudānī in (No 1176, A8).

1157. MUHAMMAD TAHIR BALKHI

Sayyid Muḥammad Ṭāhir ibn Abu'l-Qāsim Balkhī (17th c.), from Balkh, astronomer and geographer, worked in Bukhara at the court of Hoshtarhanid ruler Nadir Muḥammad Khan (1642-1645).

See: MAMS (II 605-606).

AG1. Miracles of [Terrestrial] Zones (`Ajā'ib al-ṭabaqāt) P - London (Ellis M 28, As. 179), St. Petersburg (B 786, 796, C 453/2, 598/1), Tashkent (409/5, 411/1, 1263/2, 1993/1, 2380, 4287/1, 9042, 9451).

Description of the St. Petersburg manuscripts: Miklukho-Maclay [3] (79-85). Description of the Tashkent manuscripts: SVR (I 299-300, V 316, VIII 72-76). Treatise in 7 chapters: 1) on Earth and Heavens, 2) on history, 3) on 7 climates, 4) on animals, 5-7) on miracles.

1158. MUHAMMAD HAYDAR

Muḥammad Ḥaydar (17th c.), geographer and astronomer, worked in Delhi at the court of Mogul Emperor Jihangir (1605-1627).

See: MAMS (II 606), PL (II 141).

AG1. Hydra of Haydar (Shujā`-i Ḥaydar) P - Cambrige (Sup. 796), Paris (427, 992), Patna (642), Tashkent (102/1, 2467). Description of the Tashkent manuscripts: SVR (I 306, V 315).

1159. MUHAMMAD AL-`UKAYLI

Muḥammad ibn Aḥmad ibn Miḥammad al-Ṣabbāḥ al-`Ukaylī (d. 1666), lived and died in Fas.

See: GAL² (II 707), MAA³ (181), MAMS (II 606).

M1. Pearl Thread of Sapphires on Arithmetic, Inheritance, and Timekeeping (Silk farā'id al-yawāqīt fi'l-ḥisāb wa'l-farā'iḍ wa'l-mawāqīt) - Fas (1319).

1160. QUTB AL-DIHN AL-MAHALLI AL-QABBANI

Quṭb al-Dīn Maḥmūd ibn Quṭb al-Maḥallī al-Qabbānī (d. ca 1670), Egyptian mathematician and astronomer.
See: GAL (II 470), GAL² (II 486), MAMS (II 606-607), OALT (312-313), SSM (103-104), OMLT (145).
M1. Treatise on Arithmetic of Degrees and Minutes (Risāla fī ḥisāb al-daraj wa'l-daqā'iq) - Princeton (Hout. 536/4).
M2. Introduction to Contraction of Fractions in Tables of Division of Inheritance (Muqaddima `alā ikhtiṣār al-kusūr fī jadāwil qismat al-tarikāt) - Cairo (riyāḍa. 619).
M3. [Tables of Sines and Shadows] - Cairo (Fāḍil mīqāt 202/1, 2). Tables for (60 sin x) and (12 cot x) for each minute to 3 sexagesimal digits.
A1. Treatise on Explanation of the Time of Ascension of the Fixed Stars at Night (Risāla fī bayān al-waqt alladhī taṭlā`u fīhi al-kawākib al-thābita laylan) - Cairo (mīqāt 159/2). Treatise was written in 1667.
A2. Treatise on Surplus of Turn (Risāla `alā faḍl al-dā'ir) - Princeton (Garr. 1001).
A3. Introduction to "Supplies of the Traveller" of Ibn al-Majdī (Muqaddima `alā Zād al-musāfir li Ibn al-Majdī) - Gotha (1301/1). Introduction to the treatise (No 815, A2) of Ibn al-Majdī.
A4. Tables for Obtaining the Date of the Coptic Era by the Date of the Arabic Era by Reckoning (Jadāwil mushtamila `alā istikhrāj al-ta'rīkh al-qibṭī min al-ta'rīkh al-`arabī bi'l-ḥisāb) - Berlin (IGMN II. 47, 50), Hyderabad (riyāḍa. 42).
A5. Tables Showing how to Obtain the Degree of the Sun by the Date of the Coptic Era (Jadāwil mushtamila `alā istikhrāj darajat al-shams min al-ta'rīkh al-qibṭī) - Berlin (IGMN II. 48).
A6. Qibla of Horizons (Qibla-yi āfāq) P - Mashhad (6653; Mawlawi 500/1), Najaf (Shushtari), Tehran (1804/9, 2868/3-2869/3, 3263/3, 4762/2, 4868/2; Malik 3642; Mahdawi 279/1; Univ. 205/8, 1614/3, 3828/4, 4267).
A7. Treatise on New Year (Risāla nawrūziyya) - Tehran (4868/3; Univ. 3677).
A8. [Prayer tables] - Cairo (mīqāt 214, 889/1, Ṭal`at mīqāt 241/1). Tables for latitude 31°25' of Damietta.
A9. [Treatise on the Visibility of the Crescent] - Cairo (mīqāt 159/2). Treatise was written in 1667.

1161. SAYYID HUSAYNI

Sayyid Masīkh Ḥusaynī (17th c.), mathematician.
See: MAMS (II 607).
M1. Treatise on the Possibility of Trisection of Angles (Risāla fī imkān tathlīth al-zawāyā) - Istanbul (SM Laleli 2732).
M2. Amicable Numbers (A`dād mutaḥābba) - Tehran (Malik 6389/1). Treatise was written in 1676.

1162. MUHAMMAD KHADIM

Muḥammad Ibrāhīm Ḥusayn Mudarris Khādim (17th c.), astronomer, worked in Isfahan under Safawid Shah Sulayman I (1666-1694).
See: MAMS (II 607).
A1. Treatise on the New Year (Risāla dar nawrūz) P - Tehran (Univ. 4727/15).

1163. `ABD AL-MUN`IM AL-NABTITI

`Abd al-Mun`im al-Nabtītī (d. 1673), from Nabtit, Egypt, astronomer.
See: GAL² (II 486), MAMS (II 607), OALT (308-309).
A1. [Al-Zīj] - Milan (C 80). Revision of the al-Zīj (No 750, A3) of Ibn al-Shāṭir.
A2. al-Jawharāt al-Bahiyya fī Ma`rifat al-Awqāt al-Layliyya wa'l-Nahāriyya. - Berlin (5779).

1164. MUSTAFA KATIB-ZADA (KATİP-ZADE)

Muṣṭafā ibn Muḥammad Kātib-Zāda (17th c.) (kātib-zāda = son of a scribe), Ottoman astronomer and geographer; one of his works was written in 1669.
See: MAMS (II 608), OALT (307-308), OM (III 292).
A1. Division of Degrees of Celestial Circles and Determining Trigonal Aspect, Quadrature, and Hexagonal Aspect (Taqsīm darajāt al-aflāk wa istikhrāj tathlīth wa tarbī` wa tasdīs) - is mentioned in OM.

A2. Taṣḥīḥ Rūznamā-yi Vafā'iya - Edirne (Selimiye 558/7).
A3. Sharḥ aḥvāl Davā'ir Aqālīm-i Sab`a va Rub`u Maskūn - OM, III, 292
A4. Taqvīm -Chester Beatty (TY 454)
G1. Explanation of the Positions of Circles of Seven Climates and the Inhabited Quarter [of the Earth] (Sharḥ aḥwāl dawā'ir al-aqālīm al-sab`a li'l-rub` maskūn) - is mentioned in OM.

1165. ZEKI MUSTAFA EFENDI

Zekī Muṣṭafā Efendī (17th c.), chief astronomer (munajjim bāshī) of the Ottoman Empire; translated the work (No 802, A4) of al-Kāshī into Turkish.
See: MAMS (II 608), OALT (401-403), OM (III 270).
A1. Highest Step in Commentary on "Stair of Heavens" (al-Marqā al-a`lā fī sharḥ Sullam al-samā') - is mentioned in OM. Commentary on the work (No 802, A3) of al-Kāshī.

1166. MUHAMMAD AL-SUSI AL-MARGHITHI

Abū `Abdallāh (Zayd) Muḥammad ibn Sa`īd ibn Ya`qūb ibn Aḥmad al-Sūsī al-Marghīthī (1598-1678) from Sus; he was the imam of a mosque in Marrākush.
See: GAL (II 615), MAA[3] (181-182), MAMS (II 608-609), SSM (143), STMI (326).
A1. Sufficient on the Science of al-Muqri (al-Muqni` fī `ilm al-Muqri`) - Alexandria (hisab 16-17), Algiers (80/2, 376/9, 394/6, 399/2, 646/21, 1473-1483), Beirut (239/2), Berlin (57-7), Cairo (mīqāt 178/2, 978, 1053, 1123/1, 2, Fāḍil huruf 94, Ḥalīm mīqāt 10, Ṭal`at majlis 201/2, Taymūr riyāḍa. 54, 141/2, 326/1), Copenhagen (61/5), Fas (1369), Florence (81, Kat. 293), Gotha (1456/1), London (411/2), Madrid (321), Princeton (Garr. 1002), Rabat (450/3, 2484-2487), St. Petersburg (B 820), Tlemcen (II 89), Tripoli (Um. 1107), Tunis (Nat. 18389), Edition: al-Marghīthī [1]. Revision of the work (No 722, A1) of Ibn al-Muqri`.
A2. Commentary on "Sufficient on the Science of Abu al-Muqri" (Sharḥ al-Muqni` fī `ilm Abī Muqri`) - Cairo (mīqāt 415, 1053, Ṭal`at mīqāt 122, 128/1, Taymūr riyāḍa. 326/2), Rabat (2488). Commentary on A1.
A3. Introduction to the Problems of "Sufficient" (Maṭla` `alā masā'il al-Muqni`) - Cairo (mīqāt 608, 956/3, Fāḍil huruf 83, majlis 10/1, Ḥalīm mīqāt 10), Hyderabad (riyāḍa. 67), Rabat (2489-2491), Tunis (Nat. 17905, 18055, 18104). More concise commentary on A1.
A4. Progress (Delivering Pleasure) in Commentary on "Sufficient" (al-Muqti` (al-Mumti`) fī sharḥ al-Muqni`) - Cairo (mīqāt 415, 1053, Ṭal`at mīqāt 122, 128/1, Taymūr riyāḍa. 326/2), Vienna (Acad. 344). Commentary on A1.
A5. Poem on Sine Quadrant (Naẓm fī rub` al-mujayyab) - Rabat (455/6).

1167. EVLIYA CHELEBI (EVLİYA ÇELEBİ)

Evliyā Chelebī (1611-1679), famous Turkish traveller.
See: AGL (624-631), GOW (219-222), MAMS (II 609), PI (I 249-252); Ashurbeyli [1], Cavid Baysun [1] (IA), Mordtmann [3] (EI), Mordtmann and Duda [1] (EI²), Rejchman [1], Taeschner [1] (64-68), Zheltyakov and Tveritinova [1], OCLT (101-107).
G1. Book of Travels (Siyāḥat-nāma) = History of a Traveller (Ta'rīkh-i sayyāḥ) T. Editions: E. Chelebi [2, 5]. Partial translations: English - E. Chelebi [1], Georgian - E. Chelebi [7], German - Nevzat [1], Wolfart [1], Polish - E. Chelebi [6], Russian - E. Chelebi [3], Smirnov [1] (79-102), Serbo-Croatian - E. Chelebi [4]. Description of author's travels in Asia, Europe, and Africa in the duration of 40 years; contains the description of a flight that supposedly took place at the court of Sultan Murad IV in 1630-1632. German and Russian translations of the descriptions of flights: A. Terzioğlu [1, 2].

1168. HUSAYN QUS`A

`Abdallāh Ḥusayn Quṣ`a ibn Muḥammad ibn Ḥusayn al-Tūnisī "Ibn Quṣ`a" (17th c.), astronomer.
See: MAMS (II 609), OALT (314), SSM (142).
A1. Sufficient for Pupil on Ephemerides of Planets (Ghunyat al-ṭālib fī taqwīm al-kawākib) - Cairo (mīqāt 814; Amer. Univ.), Princeton (Yehuda 147). Revision of al-Zīj (No 816, A1) of Ulugh Beg.

1169. MUHAMMAD SANJAQDAR AL-TUNISI

Abū `Abdallāh Muḥammad ibn Muḥammd al-Sharīf Sanjaqdār al-Tūnisī (17th c.), from Tunis, astronomer.
See: MAMS (II 609), OALT (347-348) , SSM (143).
A1. Al-Zīj of Sanjaqdār (Zīj Sanjaqdār) - Cairo (Taymūr riyāḍa. 319/1 - tables of the movement of the planets), Paris (2536), Princeton (Yehuda 211), Tunis (Nat. 18104).

1170. `ALI IBN MAMI AL-HANAFI

`Alī ibn Māmī al-Tūnisī al-Ḥanafī (17th c.), astronomer.
See: GAL[2] (II 218), OALT (370-371), SSM (143).
A1. [Commentary on Al-Zīj of Sanjaqdār] - Cairo (mīqāt 1046/4). Commentary on the work (No 1169, A1) of Sanjaqdār al-Tūnisī.

1171. `ISMATALLAH AL-SAHARANFURI

`Iṣmatallāh ibn A`ẓam (Niẓām) ibn `Abd al-Rasūl al-Sahāranfūrī (16-17th c.), from Saharanpur, Indian mathematician and astronomer.
See: GAL (II 547), GAL[2] (II 596), MAMS (II 609-610), STMI (316-317, 399).
M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Aligarh (Azad. Subh. 511/1), Ashqabad (2537/8), Dushanbe (1631), Lahore (Univ. 18), London (Ind. 758-760), Kazan (105/1), Rampur (I 50), Tashkent (SADUM). Editions: al-Saharanfuri [1], in the book al-`Āmilī [2]. Commentary on the work (No 1058, M1) of al-`Āmilī, written in 1675.
M2. Lights of "Essence of Arithmetic" (Anwār Khulāṣat al-ḥisāb) - Aligarh (Azad Habib 45/2, Sul. 182/42), Hyderabad (jadid 2678, 4430; Osm. 241, 366; Sa`id riyāḍa. 31), Kabul (Archive 160, Ma`arif 2), Lukhnow (4), Patna (2424), Rampur (riyāḍa. 50-51). Edition: al-Saharanfuri [1]. Commentary on the same work (No 1058, M1).
M3. System of Rules of Arithmetic (Ḍābiṭ qawā`id al-ḥisāb) - Calcutta (1472), Manchester (356), Kazan (98). Description of the Calcutta manuscript: Hidāyat Ḥusayn, Maḥfūẓ-ul-Ḥaq, and Ishaque [1] (175-176).
A1. Commentary on the "Exposition of Almagest" (Sharḥ Taḥrīr al-Majisṭī) - Calcutta (Buhar 346), London (Ind. 759), Rampur (I 427). Commentary on the work (No 606, A1) of al-Ṭūsī.
A2. Commentary on the "Explanation of Celestial Spheres" (Sharḥ Tashrīḥ al-aflāk) - Aligarh (Azad `Abd al-Ḥayy 644/21; Univ. 19), Hyderabad (Osm. 1066), Patna (2458), Rampur (hāy a 48). Commentary on the work (No 1058, A1) of al-`Āmilī.

1172. NAND RAM KAIS

Nand Ram ibn Hirānand Ka'is (17th c.), Indian mathematician, worked under Mogul Emperor Awrangzeb (1658-1707).
See: STMI (413).
M1. Establishment of Siyaq (ā'īn-i siyāq) P - Hyderabad (riyāḍa. 216).

1173. BABA KHWAJA SAMARKANDI

Bābā Khwāja ibn Khwāja `Ārif Samarkandī (17th c.), from Samarkand, astronomer, worked in Bukhara.
See: MAMS (II 610), STMI (298).
A1. Collection on Astronomy (Majmū`a dar hay'at) P - Calcutta (Curz. 401). It was written in 1678.

1174. `ATA'ALLAH LAHURI

`Aṭā'allāh Rushdī ibn Aḥmad-i Mi`mār-i Lāhūrī Khānqāhī (17th c.), eldest son of Aḥmad Lahuri (No 1106), mathematician, worked in Shahjihanabad (Delhi) at the court of Mogul Emperor Shah Jihan (1628-1857).
See: MAMS (II 610-611), PL (II 15-16), STMI (391-392, 410, 420); Chaghatay [1] (205-206).
M1. Revision of "Vijaganita" (Tarjama-yi Bīj Ganit) P - Hyderabad (Osm. 510/6; Said. riyāḍa. 20), London (Sup. 168/69; As. 194; Ind. 2001), Munich (345), Paris (236), Rampur. Revision of the work of Indian

mathematician of 12th c. Bhaskara I, dedicated to Emperor Shah Jihan; English translation of this treatise Bhaskara [1] is made from the London manuscript of the India office by Strachey.

M2. Essence of Mystery [of Arithmetic] (Khulāṣa-yi rāz) P - Aligarh (Azad Sul. 549/28), London (451/1, Sup. 17644/2), Patna (1730). Poetic treatise on arithmetic, algebra and geometry in 10 chapters, based on (No 1058 M1) of al-`Āmilī, dedicated to Emperor Shah Jihan and Prince Dara Shikuh.

M3. Treasury of Numbers (Khazīna al-a`dād) P - Bombay (Univ. 107/170). 510/6). Research: Ansari and Hussain [1]. Textbook on arithmetic, algebra, and geometry.

M4. Moon Lattice (Shabaka-yi Māh) P - Hyderabad (Salar riyāḍa. 16). The book is dedicated to Prince Dara Shikuh.

M5. [Mathematical Treatise] - Hyderabad (riyāḍa. 136).

1175. MUHAMMAD AL-KHIDRI AL-DIMYATI

Muḥammad al-Khiḍrī ibn Abī'l-Ḥājj Muṣṭafā al-Khiḍrī al-Dimyaṭī (17th c.), from Damietta, Egypt; astronomer.

See: MAMS (III 35).

A1. Commentary on "Light on Solving [Problems] on Seven Planets" (Sharḥ al-Lum`a fī ḥall al-kawākib al-sab`a) - Berlin (5687; IGMN II. 53). Description of the manuscript IGMN II. 53: Ruska and Hartner [1] (209-210). Commentary on the work (No 800, A2) of al-Kawm al-Rīshī.

1176. MUHAMMAD AL-RUDANI

Abū `Abdallāh Muḥammad ibn Sulaymān (Muḥammad) al-Fāsī ibn Ṭāhir al-Rudānī al-Sūsī al-Mālikī (1627-1683), born in Tarudant; Ottoman astronomer and constructor of astronomical instruments; worked in Maghrib, Egypt, Syria, and Turkey, died in Damascus.

See: GAL (II 610-611), GAL² (II 691, 709), MAA (203), MAA³ (177-178), MAMS (II 611-613), OALT (317-321), SSM (104); Tuqan [1] (485), al-Zirikli [1] (VII 22).

A1. First Gift to Minds on Construction of the Astrolabe (Tuḥfat ūlā al-albāb fī `amal al-asṭurlāb) - Gotha (1415).

A2. Joy for Pupils on the Astrolabe (Bahja al-ṭullāb fī'l-a`amal bi'l-asṭurlāb) - Cairo (`Abdah 2/1, falak 10968, huruf 89/8), Mosul (56/1), Princeton (Yehuda 4296). The Mosul manuscript with commentary by al-Mawṣilī (No 1316) is mentioned by al-Zirikli [1].

A3. Treatise on Drawing the Astrolabe by Geometry (Risāla fī rasm al-asṭurlāb bi'l-handasa) = Treatise on the Construction of Almucantars (Risāla fī waḍ` almuqanṭarāt) - Cairo (mīqāt 639/9, 701/3, Zaki 782/10), 2222 Istanbul (SM Esad Efendi 3769/3; NO 2921/1), Princeton (1013). Description of the manuscript: Hitti, Faris, and `Abd al-Malik [1] (319).

A4. Treatise on the Construction of the Quadrant (Risāla fī waḍ` al-'l-rub`) - Istanbul (NO 2921).

A5. Treatise on Determining the Time and Azimuth of Qibla (Risāla fī'l-mīqat wa samt al-Qibla) - Istanbul (NO 2922).

A6. Treatise on Determining the Azimuth of Qibla (Risāla ma`rifat-i samt-i Qibla) P- Hyderabad (Salar hay'a 37/5).

A7. Treatise on the Science of Astrolabe (Risāla fī `ilm al-asṭurlāb) - Tripoli (Um. 1116).

A8. [Treatise which is] Quenching Thirst on the Universal Instrument (al-Nāfi`a (al-Nāqiya) `alā al-āla al-jāmi`a) - Cairo (hay'a 28, Ṭal`at mīqāt 94/2 - both anonymous), Fas (Zawiya 168). Edition by Pellat: al-Rudani [1]. French translation and research: Pellat [8]. Other researches: Bol'shakova, Nevskaya, and Rosenfeld [1], Janin [1]. Treatise on the astronomical instrument consisting of a spherical astrolabe and terrestrial globe: the spider of this astrolabe coincides with the celestial globe and tympanum is a terrestrial globe on which seven climates and the most important cities are imaged. Work in 45 chapters written in Medina in 1662.

A9. Sparkling Necklaces on Operations [of Timekeeping] in Days and Nights (Qalā'id al-la'āli fī `amal al-ayyām wa'l-layālī) - Cairo (falak 8523/2, mīqāt 1063/6), Istanbul (SM Laleli 2756).

A10. Risala fī Asmā' al-Rusūm al-Marsūma `ala al-Asṭurlāb al-Ṣimālī - is quoted in OALT

A11. Tabṣirat al-Ikhwān - is quoted in OALT

1177. MUHAMMAD AL-FAYTURI

Abū Arawī Muḥammad ibn `Imrān ibn Abī Muḥammad al-Quṭb Sayyidī `Abd al-Salām al-Fayṭūrī (17th c.), Ottoman astronomer, worked in Egypt and North Africa.

See: OALT (335), SSM (141).

A1. Treatise Containing Some Arithmetic Rules on the Knowledge of Months, Years, [Lunar] Stations, Zodiacal Signs, Times of Qibla (Risāla tashtamil ʿalā baʿḍ qawāʿid ḥisabiyya fī maʿrifat al-shuhūr wa'l-sinīn wa'l-manāzil wa awqāt al-ṣalawāt wa'l-Qibla) = Useful Rules for Weak Minds (al-Qawāʿid al-mufīda li l-adhhān al-balīda) - Cairo (Ṭalʿat mīqāt 160/3).

1178. LUTFALLAH AL-LAHURI

Luṭfallah al-Muhandis ibn Aḥmad-i Miʿmār al-Lāhūrī, second son of Ahmad Lahuri (No 1106), Indian architect (muhandis = architect or geometer) mathematician, and astronomer.

See: PL (II 11-12, 16, 92), STMI (324-325, 404-405); Chaghatay [1] (207).

M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Cambridge (Sup. 90/2), Hyderabad (Said riyāḍa. 30), London (451/1; Ind. 2253, 2254/5), Rampur (I 75). Commentary on the work (No 1058, M1) of al-ʿĀmilī.

M2. Selected [from the "Essence of Arithmetic"] (Muntakhab) P - Aligarh (Azad ʿAbd al-Ḥayy 141/34, 142/35, Subh. 211/3; Univ. 77), Calcutta (Sup. 898), Cambridge (1690), Hyderabad (jadid 1279, riyāḍa. 211; Salar riyāḍa. 25), London (Sup. 16744/3), Madras (180/1), Manchester (Lind. 705/3), Patna (1731), Rampur (1236). Abridged versed Persian translation of the work (No 1058, M1) of al-ʿĀmilī, written in Delhi in 1681.

M3. Properties of Numbers (Khawāṣṣ-i ʿadad) = Treatise on Arithmetic (Risāla-yi arithmāṭiqī) P - Hyderabad (jadid 1634; Saʿid. riyāḍa. 29), London (451/1).

M4. Treatise on Answers to Questions (Risāla dar jawāb-i suwāl) P - Rampur (1166). Treatise on geometry in the form of questions and answers.

A1. Commentary on "Twenty Chapters on the Astrolabe" (Sharḥ-i Bīst bāb dar usṭurlāb) P - Patna (1045). Commentary on the treatise (No 606, A14) of al-Ṭūsī.

A2. Commentary on "Explanation of Celestial Spheres" of al-ʿĀmilī (Sharḥ-i Tashrīḥ al-aflāk-i ʿAmilī) P - Baku (B 283). Commentary on the treatise (No 1058, A1).

A3. Calendar of Lutfallah (Taqwīm-i Luṭfī) P - Madras (Firuz 10, 13).

A4. Translation of the "Book of Constellations of Stars" (Tarjama-yi Kitab-i ṣuwar-i kawākib) P - Aligarh (Univ. 31), Rampur (1164). Revision of the work (No 212, A1) of al-Sufi.

1179. ʿIMAD AL-DIN AL-LAHURI

ʿImād al-Dīn Ḥusayn al-Riyāḍī ibn Luṭfallāh al-Lāhūrī (d. 1732), eldest son of Lutfallah al-Lahuri (No 1178); Indian mathematician and astronomer.

See: MAMS (II 614), STMI (316); Chaghatay [1] (208).

A1. Commentary on the "Explanation of Celestial Spheres" (Sharḥ Tashrīḥ al-aflāk) - Baku (B 2831), Hyderabad (Osm. 1065), Tashkent (9783). Commentary on the work (No 1058, A1) of al-ʿĀmilī.

A2. Super-commentary on Commentary on "Compendium" of al-Jaghmīnī (al-Taʿliqāt ʿalā sharḥ Mulakhkhaṣ al-Jaghmīnī) - Aligarh (Azad. ʿAbd al-Ḥayy 625/2, 661/38). Super-commentary on commentary (No 808, A1) by al-Rumi on the work (No 547, A1) of al-Jaghmīnī.

1180. MUHAMMAD ʿABID DIHLAWI

Muḥammad ʿAbīd Muhandis Dihlawi (17th c.), born in Delhi, Indian architect and mathematician; (muhandis = architect or geometer)

See: STIM (405).

M1. Selected from the Book of Euclid (Muntakhab kitāb-i Uqlīdis) - Rampur. This manuscript was written by Mirza Khayrallah al-Lahuri (No 1181).

1181. MIRZA KHAYRALLAH AL-LAHURI

Abu'l-Khayr Mīrzā Khayrallāh ibn Luṭfallāh al-Lāhūrī (17-18th c.), second son of Luṭfallah al-Lāhūrī (No 1178); was taught by his father and brother ʿImād ibn Luṭfallāh al-Lāhūrī (No 1179). Indian mathematician and astronomer; was assigned to Delhi astronomical observatory as director by Mogul Emperor Muḥammad-Shah (1719-1748); co-author of "Al-Zīj of Muḥammad-Shah" with Saway Jay Singh (No 1322, A1).

See: MAMS (II 614-615), PL (I 501, II 1, 16, 94-95), STMI (285, 386); Chaghatay [1] (208-209).

M1. Revision of "Exposition of Euclid" (Taqrīr Taḥrīr Uqlīdis) P - Hyderabad (riyāḍa. 550; Salar riyāḍa. 4), London (Ind. 2260), Patna (25), Rampur (1158), St. Petersburg (C 1478 - incomplete), Tehran (Malik 3642). Description of the St. Petersburg manuscript: Miklukho-Maclay a. o. [1] (2). Edition of the first six books: al-Lāhūrī [1]. Revision of the work (No 606, M1) of al-Ṭūsī.

A1. Revision of the "Exposition of Almagest" (Taqrīr Taḥrīr Majisṭī) P - Aligarh (Univ. 26), Calcutta (1084), London (Ind. 2260), Patna (70, 1058), Rampur (1175). Description of the Calcutta manuscript: Ivanov [3] (95-96). Revision of the work (No 606, A1) of al-Ṭūsī.

A2. Commentary on "Twenty Chapters" of Nizam al-Dīn (Sharḥ-i Bist bāb Niẓām al-Dīn) P - Patna (1045-1047). Commentary on the work (No 938, A2) of al-Birjandī, containing arguments for assertion that orbits of planets are elliptic and not circular.

A3. Super-commentary on Commentary on "Twenty Chapters on the Astrolabe" (Ḥāshiyya bar Sharḥ-i Bīst bāb dar usṭurlāb) P - Patna (1045). Super-commentary on commentary(No 938, A10) by al-Birjandī on the work (No 606, A14) of al-Ṭūsī, written on margins of the Patna manuscript.

A4. Treatise on the Astrolabe (Risāla-yi asṭurlāb) P - Manchester (Lind. 706).

A5. Canon of Correspondence (Qānūn al-wafq) - Aligarh (Azad. Ihsan 520/1, Subh. 297/73).

A6. [Book on Astronomy] - Hyderabad (majlis 96 - a fragment). Great book written around 1690.

A7. Poetical Introduction (Madkhal-i manẓūm) P - Rampur (Nadhir 253). Versed introduction to astronomy, written in 1737.

A8. Commentary on Al-Zīj of Muḥammad-Shah (Sharḥ-i Zīj-i Muḥammad-Shāhī) P - is mentioned in the work (No 1417, E1) of Jawnpuri (PL II 20, 94).

1182. ABU BAKR-SHAH IBN MAHMUD-SHAH

Shams al-Dīn Abū Bakr-shāh ibn Najm al-Dīn Maḥmūd-shāh ibn Ḥājjī Tāj al-Dīn Kūdak (17th c.), mathematician.

See: MAMS (II 615).

M1. [Revision of the Book of Abu'l-Wafa on Geometric Constructions] - Paris (772/32). French exposition: Woepcke [7] (319-359). Revision of Abū'l-Wafā''s work (No 256, M3) written at the beginning of the17th c.

1183. MUHAMMAD AL-TILIMSANI

Abū ʿAbdallāh Muḥammad ibn Aḥmad al-Tilimsānī (17th c.), from Tlemcen, astronomer.

See: MAMS (II 615).

A1. [Astronomical Poem] - Madrid (341/4), written in 1654.

1184. MIRZA MUHAMMAD RADI SHAFI'I

Mīrzā Muḥammad Rāḍī Mustawfī ibn Muḥammad Shāfiʿī (17th c.), Iranian astronomer, worked under Safawid Shah ʿAbbās II (1642-1666).

See: MAMS (II 615).

A1. Spring of Astrologers in Commentary on "Thirty Chapters" (Rabīʿ al-munajjimīn fī sharḥ Fuṣūl al-thalāthīn) - Tehran (173; Sipahsalar 660-661). Commentary on the work (No 606, A16) of al-Ṭūsī.

1185. MUHAMMAD BARARI UMMI QAQSHAL

Muḥammad Barārī Ummī ibn Muḥammad Jamshīd ibn Jabbarī Khān ibn Majnūn Khān Qāqshāl (17th c.); Indian historian, astronomer and philosopher.

See: MAMS (II 615), PL (I 1242, II 361), PL^2 (437-438), STMI (326, 607).

E1. Ten Minds (ʿUqūl ʿashara) P - Aligarh (Azad. Qutb. 73/1), Berlin (97), Calcutta (1500/2 - incomplete, Curz. 346, 485; Buhar 222), Hyderabad (mutaf. 446), Manchester (Lind. 714), Oxford (1495), Patna (914), Vienna (27). Description of the Patna manuscript: ʿAbd al-Muqtadir [1] (171-172). Edition: Qaqshal [1].
Treatise in 10 chapters: 1) celestial sphere, 2) astronomy, 3) astrological predictions, 4) terrestrial globe, 5) medicine, 6) mountains, 7) minerals, animals, and plants, 8) seas, 9) creation, discoveries, and wonders, 10) time and space; written in 1673.

1186. MUHAMMAD JAWAD AL-KAZIMI

Muḥammad Jawād ibn Sa`d ibn Jawad al-Kaẓimī (17th c.), scholar and Indian mathematician, pupil of al-`Āmili (No 1058).

See: GAL² (II 596), MAMS (II 616), SSM (161), STMI (412).

M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Baku (B 6184), Cairo (falak 3768, 3927, riyāḍa. 289, 1035/1), Hyderabad (Said riyāḍa. 5; Salar riyāḍa. 16-17), London (6280), Mashhad (Gauharshad 846, 1705, 1755/2; Nawwab 34; Univ. 330), Najaf (Ayatallah 128), Patna (2423), Rampur (49), St. Petersburg (A 876/3), Tehran (Mahdawi 358/1). Edition: in the book of al-`Āmilī [2]. Commentary on the work (No 1058, M1) of al-`Āmilī.

1187. HUSAYN IBN MUHAMMAD

Ḥusayn ibn Muḥammad (17th c.), mathematician.

See: MAMS (II 616).

M1. Commentary on the "Resolution of Essence" (Sharḥ Ḥall al-Khulāṣa) - Vienna (No 1157/1). Super-commentary on the commentary (No 1155, M1) by al-Jazā'irī on the work (No 1058, M1) of al-`Āmilī.

1188. MUHAMMAD ZAMAN ASTURLABI MASHHADI

Muḥammad Zamān ibn Sharaf al-Dīn Ḥusayn Asṭurlābī Mashhadī (17th c.), from Mashhad; astronomer and constructor of astrolabes.

See: MAMS (III 30), SSM (162), STMI (408).

M1. Explanation of Operation with the Proportional Compass (Tashrīḥ dar a`māl-i pirkār-i mutanāsiba) - Rampur (1163).

A1. Treatise of Fahr al-Dīn on Determining the Azimuth of Qibla (Faḥriyya dar istikhrāj-i samt-i Qibla) P - Isfahan (Rizawi 722/1).

A2. Gift for Sulayman (Tuḥfat-i Sulaumānī) P - Cairo (Ṭal`at falak fārisī 14). Al-Zīj in 24 parts for Mashhad.

1189. MALIK MAHMUD KHWANSARI

Malik Maḥmūd Karrāmī ibn Malik Aḥmad Khwānsārī (17th c), astronomer.

See: PL (II 106), SSM (162).

A1. Treasury of Uses on Mentioning Rules (Kanz al-fawā'id fī dhikr al-qawā`id) P - Cairo (Ṭal`at falak fārisī 6), Istanbul (SM Hamid. 851).

1190. HAYDAR AL-JAZARI

Haydar ibn `Abd al-Raḥmān al-Ḥusaynī al-Jazarī (17th c.), Ottoman astronomer.

See: GAL² (II 1020, III 1319), MAMS (III 42), OALT (351-353), SSM (162).

A1. Treatise of Haydar on the Astrolabe (Risāla haydariyya fī'l-asṭurlāb) = Delight of Pupils in the Science of Astrolabe (Nuzhat al-ṭullāb fī `ilm al-asṭurlāb) - Baku (B 396/4, 1996/4), Berlin (5802), Cairo (Taymūr riyāḍa. 134, Zaki 782/13), Istanbul (SM 9037/5, Laleli 2726/3), Princeton (Garr. 362, 1014; Yehuda 3792, 4582). Description of the first Princeton manuscript: Hitti, Faris, and `Abd al-Malik [1] (319-320).

1191. MUHAMMAD ASHRAF AL-TABATABAI

Muḥammad Ashraf ibn Ḥabīballāh al-Ḥasanī al-Ḥusaynī al-Ṭabāṭabāī (17th c.), mathematician.

See: MAMS (II 616), STMI (406).

M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Baghdad (2944), Patna (2425). Commentary on the work (No 1058, M1) of al-`Āmilī.

1192. IBN ABI ZAYD

Ibn Abī Zayd (17th c.), astronomer.

See: MAMS (II 616).

A1. Highest Step on Timekeeping in the Day and Night (Marqā al-ma`ālī fī awqāt al-ayām wa'l-layālī) - Vienna (Acad. 335). Treatise was written in 1648.

1193. `ALI AL-SAFAQUSI

(`Alī ibn) Aḥmad ibn `Abd al-`Azīz (Muḥammad) al-Sharafī al-Ṣafāqusī (d. 1682), from Sfax, Tunisia; worked in Cairo, astronomer.

See: GAL (II 612), GAL² (II 486, 694), MAA (191), MAMS (II 561), OALT (315-316), SSM (105-106).

A1. Pearls of Pride on Operations with the Almucantar Quadrant in all Regions and Directions (al-Durar al-fākhirāt fi'l-`amal bi rub` al-muqanṭarāt fī jamī` al-aqṭār wa'l-jihāt) - Cairo (mīqāt 58, 737, 862/2), Paris (2551), Princeton (Yehuda 333), Tunis (Nat. 18291). Treatise in 20 chapters.

A2. Victory of the Lord Creator for Resolution of Words of "Fragrant Breath" (Fatḥ Rabb al-bariyya fī ḥall alfāz Nasamat al-nafḥiyya) - Cairo (Fāḍil majlis 39/1). Commentary to the work (No 1031, A1) of Ibn Ghanim.

A3. [Star Catalogue for 1685] - Cairo (falak 6700).

A4. [Star Catalogue for 1689] - Cairo (mīqāt 740/1).

A5. Correction of Opinions on Operations [of Timekeeping] at Night and Day, (Tanqīḥ al-afkār fī a`māl al-layl wa'l-nahār) - Tripoli (Um. 1178/1).

AG1. [Astronomical and Geographical Treatise] - Oxford (I 935), Paris (2278). Research of the map of the world: Nallino [5].

1194. `ALI AL-DADASI

`Alī ibn Muḥammad ibn Abu'l-Qāsim ibn Ibrāhīm ibn `Alī ibn Muḥammad al-Dādāsī al-Maghribī (d. 1683), from Dades, the Atlas Mountains; Maghribī and Egyptian astronomer, worked in Fas and Cairo.

See: GAL (II 616), GAL² (II 708), MAA³ (180), MAMS (II 616-617), OALT (322-323), SSM (142-143). TIFI (334-335).

A1. Science of Time during the Day by Reckoning for Beginners (Bidāyat al-ṭullāb fī `ilm waqt al-yawm bi'l-ḥisāb) - Fas (Zawiya 8c), London (409), Madrid (329/6). Treatise was written in 1638.

A2. Guide for Pupils (Ma`ūnat al-ṭullāb) - London (410). Poem on timekeeping written in 1648.

A3. Sapphires for the Beginners for the Study of the Science of Timekeeping (al-Yawāqīt li'l-mubtadī fī ma`rifat al-mawāqīt) - Cairo (falak 4029/1, mīqāt 135/1, 1169/9, Fāḍil mīqāt 236), London (411/9), Madrid (332), Princeton (Yehuda 4612), Rabat (2526). Treatise was written in 1648.

A4. Victory of the Timekeeper Commenting on "Sapphires" (Fatḥ al-muwaqqit fī sharḥ al-Yawāqīt) - Cairo (Fāḍil mīqāt 203/1), Damascus (5150). Commentary on A3.

1195. YUNIS AL-KAZANI

Yūnis ibn Iwanay ibn Usay al-Oruwī al-Qāzānī (al-Bulghārī) (b. 1636), from Kazan, Tatar enlightener.

See: MAMS (II 617).

M1. Commentary on "Inheritance" of al-Sajawandī (Sharḥ-i Farā'iḍ al-Sajāwāndī) P -Kazan (60, 283, 451, 473). Description of the manuscripts: Fatḥiyev [1] (18-19). Commentary on the work (No 527, M8) of al-Sajawandī.

1196. MUSTAFA EFENDI

Muṣṭafā ibn Muḥammad Efendī (d. 1688), Turkish mathematician and astronomer.

See: MAMS (II 617), OALT (327-328), OM (III 302), OMLT (151).

M1. Garden of Friends on Commentary on the "Essence of Arithmetic" (Rawḍat al-aḥbāb fī sharḥ Khulāṣat al-ḥisāb) - is mentioned in OM. The complete list is given in OMLT. Commentary on the work (No 1058, M1) of al-`Āmilī.

A1. Treatise on Astrolabe (Risālat al-asṭurlāb) T - Istanbul (NO 2916).

A2. Guide for Operating what is Related to the Perfect Quadrant (Hidāyat al-`āmil fī mā yata`allaq bi rub` al-kāmil) - is mentioned in OM.

A3. Risāla fī Rub` al-Mujayyab - is quoted in OALT.

1197. MUHAMMAD AL-`AMULI

Muḥammad ibn al-Ḥurr al-`Āmulī (17th c.), poet and mathematician.
See: SSM (163).
M1. [Geometric Poem] - Cairo (majlis 846/4). Poem based on the work (No 655, M1) of al-Samarkandī.

1198. LATIF IBN BABAKALAN AL-SAMARKANDI

Laṭīf ibn Muḥammad ibn Bāba al-Samarkandi, "Bābākalān Muftī (17th c.), from Samarkand; he was a mufti in Bukhara, also a jurist and mathematician.
See: MAMS (II 617-618); `Abdullayev and Hikmatullayev [1] (87-88), Muzafarova [8].
M1. Treatise on the Science of Arithmetic (Risāla dar `ilm-i ḥisāb) = Treatise on Operations of Arithmetic (Risāla dar a`māl-i ḥisāb) P - Dushanbe (1611/3), Tashkent (1693/6, 2245/5, 7131/14, 7599/2, 8698/2). Description: Muzafarova [8]. Research: Kayumov and Sharipov [1].
M2. Chapter on Arithmetic of Fractions (Bāb dar ḥisāb-i kusūr) P - Dushanbe (2098/7).
M3. Treatise on Arithmetic and Book on Geometry (Risāla dar ḥisāb wa kitāb dar handasa) P - Tashkent (1451/1). Description: Muzafarova [8].
M4. Treatise on Arithmetic (Risāla dar ḥisāb) = Treatise on the Science of Arithmetic (Risāla dar ilm-i ḥisāb) P - Dushanbe (IZA 101/9), London (Ind. 2242-2245), Oxford (1546/4), Samarkand (1008459/11), Tashkent (145/1, 2245/5), Tbilisi (AS 498/1).
M5. Six Operations for Inheritance (Shash `amal-i farā'iḍ) = Four Kinds of Heritage (Waṣiyyat bar chahār qism) P - Tashkent (2692/7, 7131/14). Description: Muzafarova [8].
M6. Arithmetic Treatise on the Establishment of Inheritance (Risāla-yi ḥisāb dar ḍabt-i farā'iḍ) P - St. Petersburg (C 2417). Treatise in 6 chapters.
M7. Mathematics (Riyāḍiyāt) P - St. Petersburg (B 4741). Treatise in 6 chapters.

1199. MUHAMMAD AMIN AL-MU'MINABADI

Muḥammad Amīn ibn `Ubaydallāh al-Mu'minābādī (17th c.), mathematician.
See: KZ (II 439), MAMS (II 618-619).
M1. Treatise on the Arithmetic Mode of Operation by Lattice (Risāla dar bāb-i ḥisābī `amal-i shabaka P - Tashkent (7131/13).
M2. Explanation of Inheritance (Sharḥ-i farā'iḍ) P - Samarkand (1187140), Tashkent (2245/6). Description: Muzafarova [7] (86, 90-91).

1200. SAQI MUHAMMAD CHAHARYAKI

Saqī Muḥammad ibn Muḥammad Amīn al-Sāī Chaharyakī (17th c.), ahund, jurist, and mathematician.
See: MAMS (II 619).
M1. Treatise on Numerical Problems and the Way of Their Research (Risāla dar masā'il `adadiyya wa ṭarīq-i taṣḥīḥ-i ān) = Treatise on the Science of Inheritance (Risāla dar `ilm-i farā'iḍ) P - Tashkent (2245/10, 5512/1, 7131/12). Description: Muzafarova [7] (86-88). Treatise on integer, rational, and irrational numbers and inheritance. This treatise has three manuscripts with different titles.
M2. Treatise on Heritages (Risāla fī waṣiyāt) P - Tashkent (2245/19).

1201. TURSUN AL-ZAMINI AL-FARAIDI

Tursūn al-Zamīnī al-Farā'iḍī (17th c.), jurist, mathematician, knowledgeable in inheritance (al-farā'iḍī).
See: MAMS (II 619).
M1. Gift to Amir (Tuḥfat al-amīr) - Tashkent (2245/16). Description of the manuscripts: Muzafarova [7] (66. 92). Treatise contains chapters on arithmetic and inheritance.
A1. Treatise on more Exact Determination of the Indian Circle (Risāla dar taḥqīq-i dā'ira-yi hindī) P - Tashkent (1422/4).

1202. `ABD AL-WAHHAB AL-SIRAJI

`Abd al-Wahhāb al-Muqrī al-Sirājī (17th c.), astronomer.

See: GAL (II 470-471), MAMS (II 619-620), OALT (308), SSM (106).

A1. Exposition of Opening of Dark in Description of the Solar Eclipse (Taḥbīr inkishāf al-labs fī taḥrīr inkisāf al-shams) - Cairo (Faḍil mīqāt 18-19), Munich (867).

1203. `ABD AL-QADIR AL-FASI

Abu Muḥammad `Abd al-Qādir ibn `Alī Abū'l-Maḥāsin Yūsuf al-Fāsī (1599-1680), born and worked in Fas; mathematician and astronomer.

See: GAL² (II 708), MAMS (II 620).

M1. Poem (Qaṣīda) - Vienna (Acad. 342). Research: Colin [1]. Arithmetic poem.

A1. Poem on Months (Urjūza fī'l-ashhār) - Rabat (2525).

1204. MUHAMMAD QAZWINI

Raḍī al-Dīn Muḥammad ibn Ḥusayn Qazwīnī (d. 1685), born in Qazwin, mathematician and astronomer, worked in Qazwin and Isfahan under the Safawid Shah `Abbās II (1642-1666).

See: MAMS (II 620).

M1. Treatise on Arithmetic (Risāla dar ḥisāb) P -Tehran (2136, 2173, 2767/15).

A1. Treatise on Stars (Risāla dar nujūm) P - Tehran (4767/9).

A2. Treatise on Time (Risāla-yi waqtiyya) P - Mashhad (234), Tehran (2868/4, 4868/1).

Mc1. Test of Magnitudes (Mīzān al-maqādīr) - Mashhad (8223), Tehran (2868/1).

Mc2. Measuring [Treatise] (`Iyāriyya) - Tehran (6150; Sipahsalar 617/3).

1205. MUHAMMAD AL-DIMYATI

Muḥammad ibn Muḥyi al-Dīn al-Dimyāṭī, known as "al-Nimra" (17th c.), from Damietta, Egyptian astronomer.

See: OALT (347), SSM (106).

A1. [Commentary on Prayer tables of Quṭb al-Dīn al-Mahallī] - Cairo (mīqāt 991). Commentary on the work (No 1123, A8) of al-Shināzī.

1206. `ABD AL-QADIR AL-MAHALLI

`Abd al-Qādir ibn Ibrāhīm al-Mahallī (17th c.), Egyptian mathematician.

See: SSM (106).

M1. Establishment of Finding Unknown Numbers by Proportions (al-Ḍābiṭ fī istikhrāj al-majhūlāt bi'l-a`dād al-mutanāsiba) - Cairo (riyāḍa. 899/2). Arithmetical poem.

M2. [Author's Commentary on His Poem] - Cairo (Ṭal`at majlis 635/1). Commentary on M1.

1207. `ABD AL-RAHMAN AL-FASI

Abū Zayd `Abd al-Raḥman ibn `Abd al-Qādir al-Fihrī al-Fāsī (1631-1685) was born, lived and died in Fas; scholar-encyclopaedist.

See: GAL (II 460-463, 612, 615), GAL² (II 694-695), MAA³ (182), MAMS (II 620-621), OALT (324), SSM (143); Lévi-Provençal [4].

E1. Book of Hypostasis on Foundations of Sciences (Kitāb al-uqnūm fī mabādī' al-`ulūm) - Cairo (`aqaid 3664, 3726), Rabat (284, 286), Tlemcen (fragments). Encyclopaedia in verses containing 281 chapters.

A1. Selected for Pupils on the Construction of Astrolabe (Nukhbat al-ṭullāb fī `amal al-asṭurlāb) - Rabat (453/3, 457/6, 497/14, 2528-2530), Vienna (Acad. 334).

A2. Poem on the Science of an Astronomical Instrument Known as the Astrolabe (Manẓūma fī `ilm al-āla al-nujūmiyya al-ma`rūfa bi'l-asṭurlāb) = Poem on the Science on Astrolabe (Qaṣīda fī `ilm al-asṭurlāb) - Tripoli (T 25/13), Vienna (Acad. 343). Section of the book E1 (see commentary (No 1361, A1) of al-Bannānī).

A3. Poem on [Astrolabe] Zarqala (Manẓūma fī'l-zarqāliyya) - Tunis (Ahmad. 5608). It probably coincides with A2.

A4. Poem on Timekeeping (Manzūma fī'l-tawāqīt) - Rabat (2533-2535). It is probably a chapter of E1.

A5. [Astronomical Poem] - Madrid (Nav. X/4). It is probably a chapter of E1.

A6. Required on the Sine Quadrant (al-Maṭlab fi'l-rub' al-mujayyab) - Vienna (Acad. 333).

A7. Performance of the Required (Wāfiyyat al-maṭlūb) - Vienna (Acad. 332). Treatise on the sine quadrant.

A8. Necklace of Jewels on the Almucantar Quadrant ('Iql al-jawhar fi rub' al-muqanṭar) - Berlin (5867).

A9. Decorated Brocade on Principles of the Science on Stars (al-Dībāj al-marqūm fī uṣūl 'ilm al-nujūm) - Berlin (5887). Description of the manuscript: Ahlwardt [1] (284).

A10. Gift to Him Who Needs Science on Equations [of Planets] and Al-Zījes (Tuḥfat al-muḥtāj fī 'ilm al-ta'dīl wa'l-azyāj - Cairo (mīqāt 1081/3).

A11. Great Required on what Is Related to the Poem of 'Abd al-Raḥmān ibn 'Abd al-Raḥīm (al-Maṭlab al-kabīr fīmā ya'taliqu bi qaṣīdat 'Abd al-Raḥmān ibn 'Abd al-Raḥīm) - Cairo (Taymūr riyāḍa. 141/3).

Ph1. Brilliance in Speech on "House of the Needle" (al-Ghurra fi'l-kalām 'alā bayt al-ibra) - Cairo (Ṭal'at majlis 367/2), Rabat (450/6), Vienna (Acad. 336). Poem on magnetic compass.

1208. 'ABDALLAH AL-MUTHANNA AL-SHARJI

Fakhr al-Dīn 'Abdallāh ibn 'Abdallāh ibn 'Alī al-Sharjī "Muthannā" (d. 1686), Yemeni astronomer, brother of al-Ḥasan ibn 'Abdallāh al-Sharjī (No 1152).

See: GAL (II 537), AL^2 (II 597), MAMS (II 621), MAY (45), OALT (324-325), STIM (275, 342).

A1. Al-Zīj of al-Muthanna al-Sharji (Zīj al-Muthannā al-Sharjī) = Peak of Perfection on the Movement of Seven Planets (Ghāyat itqān al-ḥarakāt li'l-sab'a al-kawākib al-sayārāt) - Berlin (oct. 2542), Hyderabad (342, 395; Salar 29/2), London (Sup. 769), Milan (E 16, 403, F 201-202), Rome (Vat. 955), Sana'a (Grand Mosque; al-Ḥātimī; al-Sharafī).

1209. IBRAHIM AL-QARAMANI AL-AMIDI

Ibrāhīm ibn 'Abd al-Rahmān al-Qaramānī al-Āmidī (17th c.), from Karaman (Turkey), Turkish jurist and astronomer.

See: GAL^2 (II 185, 939), MAMS (II 621-622), OALT (288-291), SSM (173), STMI (314).

A1. (al-Hay'a al-islāmiyya); (Risāla fi'l-hay'a al-sunniyya); (Mukhtaṣar al-Hay'a al-sunniyya); (Kitāb al-hay'a 'alā ṭarīq ahl al-sunna wa'l-jamā'a); (Ḥikmat al-islām); (Risāla fi'l-hay'a al-mabniyya 'alā'l-Ḥadīth wa'l-āthār); (Kitāb al-hay'at al-islām wa kalimat ahl al-īmān) - Cairo (falak 3808, Ḥalīm hay'a 5-6, Taymūr majlis 257/20; I 17), Heidelberg (384), Istanbul (BU 17800), London (Sup. 1250/3), Princeton (Yehuda 799/1), Kazan (1102), St. Petersburg (B 1632, 3221, 3867). Description of the Princeton manuscript: Mach [1] (421). Abridgement of the work (No 896, A2) of al-Suyūṭī, is dedicated to Ottoman Sultan Mehmed IV (1648-1687).

KZ (VI 558) mentions Turkish translation of this work titled "Translation of Astronomy" (Tarjama-yi Hay'a) by Ḥusayn Efendi Nazīm-Zāda al-Baghdādī (d. 1708).

1210. AHMAD AL-KUTUBI AL-KHARAQANI

Shihāb al-Dīn Aḥmad al-Kutubī al-Kharaqānī (17th c.), Egyptian astronomer.

See: MAMS (III 14), SSM (106).

A1. Section on Knowledge of Property of Ephemerides of Mercury by "Rare Pearls" (Faṣl fī ma'rifat kayfiyyat taqwīm 'Uṭārid min al-Durr al-yatīm) - Cairo (mīqāt 131, Ḥalīm mīqāt 16/2). Application of the work (No 815, A19) of Ibn al-Majdī.

1211. MUHAMMAD AL-MUSAWI

Mu'izz al-Dīn Muḥammad al-Musawī (1640-1695), poet and naturalist.

See: MAMS (II 622).

Me1. Treatise on the Explanation of Skipping (Risāla fī bayān al-ṭafra) - Manchester (360).

1212. AHMAD AL-BASHTAQI

Aḥmad al-Bashtaqī (d. 1698), sheikh al-Islam; astronomer.

See: GAL (II 471), MAMS (II 622).

A1. Celestial Harmony (al-Tawqī'a al-falakiyya) - Tunis (Nat. 18158).

A2. Result of Harmony and Parts of Time for the Latitude 30 degrees for known Coptic Days (Natījat al-tawqī`āt wa ḥiṣaṣ al-awqāt li `arḍ 30 martaba `alā'l-ayyām al-mashhūra al-qib-ṭiyya) - Cairo (falak 6831, mīqāt 22, 282, Taymūr riyāḍa. 171/1).

1213. MUHAMMAD BAQIR AL-MAJLISI

Muḥammad Bāqir ibn Muḥammad Taqī ibn Maqṣūd `Alī al-Majlisī al-Iṣfahānī (1628-1699), born in Isfahan: sheikh-al-Islam under Safawid Shahs Sulaymān I (1666-1694) and Ḥusayn I (1694-1722).

See: GAL² (II 572-574), MAMS (II 622-623), PL (I 196-198, II 196-198, 462-464, 469), PL² (581-586, 634-635), STMI (326); Browne [6] (403-404, 409-410).

A1. Treatise on Establishing the Movement of the Sun (Risāla dar ithbāt-i ḥarakat-i shams) P - Cairo (mīqāt 9).

A2. Source of Astronomy (`Ayn al-hay'a) P - Cambridge (Sup. 1634/12), London (Ind. 2668). Edition: al-Majlisi [1].

Me1. Weights (Awzān) P - Qumm (Fayziye 1427/2), Shiraz (Hanaka 90/8), Tehran (Sipahsalar 7525/2; Univ. 3453/2, 4616/45, Ilah. 245/4), Yazd (`Umūmī 445/4).

H1. Life of Hearts (Ḥayāt al-qulūb) P - biographies of prophets and Shi'ite imams in 3 volumes. Edition: al-Majlisī [3]. Partial English and German translations: al-Majlisī [2, 4].

PH1. Seas of Lights (Biḥār al-anwār). Edition: al-Majlisī [5]. Collection of Shi`ite hadiths, the main theological work of al-Majlisī.

1214. KHIDR AL-QABBANI

Khiḍr `Abd al-Qādir ibn `Abd al-Raḥmān ibn Aḥmān ibn Aḥmad al-Barlasī al-Qabbānī (17th c.), astronomer and mechanic.

See: MAMS (II 623), SSM (90-91).

A1. Treatise on the Knowledge of Lunar Eclipses (Risāla fī ma`rifat khusūf al-qamar) - Kazan (2799).

A2. Delight of Observations in Solution of Difficulties of the Movement of the Sun and the Moon (Nuzhat al-naẓar fī ḥall al-shams wa'l-qamar) - Jerusalem (Khalid. 3).

A3. Threading Precious Sapphires in the Knowledge of Operations with the Crescent (Naẓm al-yawāqīt al-ghawāl fī ma`rifat `amal al-hilāl) - Princeton (Yehuda 786).

A4. Necklace of Jewels and Pearls in the Knowledge of Operations with the Crescent (`Iqd al-jawhar wa'l-lāl fī ma`rifat `amal al-hilāl) - Princeton (Yehuda 786, before A3).

A5. Answer to Questions on the Knowledge of Operations with the Crescent by the Method of Tables (Ijābat al-su'āl fī ma`rifat `amal al-hilāl `alā ṭarīq al-jadāwil) - Cairo (majlis 323/10, mīqāt 513/3).

A6. Collection of Fruits in the Knowledge of Operations with the Crescent (Qaṭf al-zalāl fī ma`rifat `amal al-hilāl) - Cairo (mīqāt 108/1).

A7. Collection of Fruits in Operations of Reckoning Eclipses (Dāniyāt al-quṭūf fī `amal ḥisāb al-khusūf) - Princeton (Yehuda 786, after A4).

A8. Gift of Problems for Operations of [Determining] Eclipses by the Method of Tables (Tuḥfat al-masā'il fī `amal al-khusūf `alā ṭarīq al-jadāwil) - Princeton (Yehuda 786, after A7).

A9. Guide for the Distressed in Operations of [Determining] the Solar and Lunar Eclipses (Irshād al-malhūf fī `amal al-khusūf wa'l-kusūf) - Princeton (Yehuda 786, after A8).

A10. Answer to the Question on the Knowledge of Operations with the Crescent by the Method of Tables (Ijābat al-su'āl fī ma`rifat `amal al-hilāl `alā ṭarīq al-jadāwil) - Cairo (majlis 323/10), mīqāt 513/3).

Me1. Beautiful Jewels and the Sun of the Best [at this] Time in the Science on Level Balance (al-Jawāhir al-ḥisān wa shams `ayn al-zamān fī `ilm al-qabbān) - Berlin (IGMN IV. 1), Cairo (riyāḍa. 30/1, 32, 1102/1, Fāḍil riyāḍa 80/1, Taymūr riyāḍa 27), Damascus (4). Description of the Berlin manuscript: Ruska and Hartner [1] (220-222). Description of the first Cairo manuscript: Sayyid [1] (40). Treatise in 10 chapters.

Me2. Treatise on Determining the Vertical Load and the Throwing Criterion from it (Risāla fī ma`rifat al-wazn al-qā'im wa ṭarḥ al-iyār minhu) - Cairo (Fāḍil riyāḍa. 30/8).

1215. AHMAD AL-DAMAMINI

Muhadhdhab al-Dīn Aḥmad ibn `Abd al-Riḍā al-Damāmīnī al-Baṣrī (d. 1674), Ottoman theologian, mathematician and astronomer.

See: GAL^2 (II 577-578), MAMS (II 623-624), OALT (309-310), OMLT (146-147).

M1. Treatise on Joints (al-Risāla al-`uqūdiyya) - Princeton (Yehuda 984), Rampur (I 342). Treatise on finger reckoning.

M2. [Arithmetic Treatise] - Princeton (Yehuda 984, before treatise M1).

A1. Celestial Treatise on the Science of Astronomy (al-Risāla al- falakiyya fī `ilm al-hay'a) - Princeton (Yehuda 984, between treatises M1 and M2), Rampur (I 425, 714).

1216. ABU'L-FATTAH AL-DANUSHIRI

Abū'l-Fattāḥ ibn `Abd al-Raḥmān al-Danūshirī al-Shāfi`ī (17[th] c.), astronomer.

See: MAMS (III 40-41), OALT (265-266).

A1. Treatise on Introductory Comments on Operations with the Quadrant [of Astrolabe] Shikaziya (Risāla bi'l-ishāra al-fatḥiyya fi'l-`amal bi'l-rub` al-shakāziya) - Tunis (Sadiq. 108).

Description: Samsó [5] (183-184).

A2. Jawharat al-Nafs fī Ma`rifat al-Tārīkh al-Musta`mal wa Ḥall Darajat al-Shams - is quoted in OALT.

1217. MUSTAFA AL-SHIRKASI

Muṣṭafā ibn Shams al-Dīn ibn Aḥmad ibn Khiḍrby al-Shirkasī (or al-Jirkasī/al-Chirkasī) al-Ṭāhirī al-Khalwatī al-Falakī al-Dimyāṭī al-Shāfi`ī (17[th] c.), Egyptian astronomer of Circassian origin, born in Damietta.

See: GAL (II 470), GAL^2 (II 486), MAMS (II 624), OALT (269-270), SSM (102).

A1. Sufficient for the Beginner (Kifāyat al-mubtadī) = Poem on Truncated Quadrant (Manẓūma fi'l-rub` al-maqṭū`) - Cairo (mīqāt 161/1).

A2. Precious Pearl on the Sine Quadrant of Idris (al-Durr fi'l-jayb al-nafīs fi'l-rub` al-mansūb li Idrīs) = Threaded Pearls on the Science on the Sine Quadrant (al-Durr al-manẓūm fi'l-silk al-mujayyab fī `ilm al-rub` al-dā'ira al-mujayyab) - Cairo (mīqāt 161/2, Fāḍil majlis 39/2) under the first title; Mosul (304/7) under the second title.

1218. SA`ID AL-TINBUKTI AL-JANAWI

Sa`īd ibn `Abdallāh al-Tinbuktī al-Janawī (17[th] c.), from Timbuktu, Sudan, Egyptian astronomer.

See: SSM (102).

A1. Phenomena for Ahmad by Commentary on "Fragrant Breath" (al-Maẓāhir al-Aḥmadiyya fī sharḥ al-Nasama al-nafḥiyya) - Cairo (lughat 89/7). Commentary on the work (No 1031, A1) of Ibn Ghānim.

1219. HASAN AL-TANTAWI

Ḥasan al-Ṭanṭāwī (17[th] c.), from Tanta, Egyptian astronomer.

See: SSM (106).

A1. [Tables for Sundials] - Cairo (Fāḍil mīqāt 184/3). Tables for latitudes 31° of Alexandria and 31°23' of Damietta.

1220. `ABDALLAH AL-AZHARI AL-HANBALI

`Abdallāh ibn Aḥmad al-Maqdisī al-Azharī al-Ḥanbalī (end of 17[th] c.), from Jerusalem, astronomer.

See: GAL (II 470), GAL^2 (II 486), MAMS (II 624), OALT (305-307), SSM (105).

A1. Gift to the Clever and Aim of the Intelligent (Tuḥfat al-labīb wa bughyat al-arīb) - Berlin (5856), Cairo (mīqāt 639/10 - incomplete, Fāḍil mīqāt 22), Paris (2046). Treatise in 5 chapters.

A2. Gift to Minds on Explanations of Omens by Tails (Tuḥfat al-albāb fī bayān aḥkām al-adhnāb) - Cairo (mīqāt 24, 178/1, 639/10, 729, Fāḍil majlis 62/5, Khalīl mīqāt 6, Taymūr riyāḍa. 89, 236, 383), Paris (4697), Princeton (Yehuda 368, Hout. 1163/11), Tehran (4448/6). Treatise on astrological predictions connected with comets written in 1667.

1221. HUSAYN AL-KILABI

Ḥusayn ibn Muḥammad al-Kilābī (17th c.), Egyptian astronomer.
See: SSM (102-103).

A1. Concise Treatise on Operations with the Octant of Circle on which there are Almucantars (Risāla mukhtaṣara fi'l-`amal bi thumn al-dā'ira al-mawḍū ` `alayhi al-muqanṭarāt) - Cairo (mīqāt 1093/10). Treatise in 19 chapters.

A2. Concise Treatise on the Concealed Sine [Quadrant] (Risāla mukhtaṣara `ala al-jayb al-ghayib) - Cairo (mīqāt 1093/4). Treatise in 22 chapters.

1222. MUHAMMAD AL-KUTUBI

Muḥammad al-Kutubī (17th c.), Egyptian astronomer.
See: OALT (276), SSM (102).

A1. [Almanac for Cairo] - Cairo (Ṭal`at mīqāt 87). Almanac written in 1634 showing prayer times.

1223. `ALI AL-ZA`TARI AL-MISRI

`Alī al-Za`tarī al-Miṣrī (17th c.), Egyptian astronomer; the astrolabe he constructed in 1671 is in TK library in Istanbul.
See: OALT (501), SSM (105).

A1. Uses in Knowledge of Operations with Equatorial Semicircle (Fawā'id fī ma`rifat al-`amal bi niṣf dā'irat al-mu`addil) - Cairo (mīqāt 879/1, Taymūr riyāḍa. 176).

A2. al-A`māl al-Falakiyya. - is quoted in OALT

1224. MUHAMMAD SHILLI BA`ALAWI

Muḥammad ibn Abī Bakr ibn Aḥmad Shillī Bā`alawī (17th c.), Egyptian astronomer.
See: OALT (316-317), SSM (105).

A1. [Treatise on the Noon Shadows] - Cairo (mīqāt 130/2). Treatise on the noon shadows at the latitude 21° of Mecca.

1225. AHMAD AL-TILIMSANI

Aḥmad ibn Muḥammad al-Maghribī al-Tilimsānī al-Anṣārī (17th c.), from Tlemcen, mathematician (17th c.),
See: MAMS (II 624).

M1. Essence of Arithmetic (Zubdat al-ḥisāb) P - Calcutta (899). Description of the manuscript: Ivanov [1] (104). Treatise in 4 books: 1) arithmetic, 2) geometry, 3) algebra, 4) other mathematical methods.

1226. HASAN ARUMIHAI

Hasan Arūmīhāī (17th c.), astronomer.
See: MAMS (II 625).

A1. Commentary on the "Explanation of Celestial Spheres" (Sharḥ Tashrīḥ al-aflāk) - Mashhad (5571, 6355). Commentary on the work (No 1058, A1) of al-`Āmilī.

1227. MUHAMMAD AL-QATARI AL-JAWLANI

Shams al-Dīn Abū'l-Ṣalāḥ Muḥammad al-Qaṭarī al-Jawlānī (17th c.), Egyptian astronomer.
See: OALT (513-514), SSM (103).

A1. [Commentary on] Treatise for Shihab al-Dīn on Operations with the Sine [Quadrant] (al-Risāla al-Shihābiyya fi'l-a`māl al-jaybiyya). Commentary (No 1228, A1) of al-Rashīdī. Treatise in verses which itself is a commentary on the work (No 873, A8) of Sibṭ al-Maridīnī.

1228. `ALI AL-HANAFI AL-RASHIDI

`Alī ibn Rajab ibn `Alī ibn Muḥammad Mashāq al-Ḥanafī al-Rashīdī (17th c.), Ottoman astronomer; pupil of al-Nabtiti (No 1163).

See: OALT (287-288), SSM (103).

A1. Commentary on Poem of Shams al-Dīn Abu'l-Salāh Muḥammad al-Qaṭarī on "Treatise for Shihāb al-Dīn" of Sibṭ al-Maridīnī (Sharḥ manẓūmat Shams al-Dīn Abī'l-Ṣalāḥ Muḥammad al-Qaṭarī `alā'l-Risāla al-Shihābiyya li Sibṭ al-Maridīnī) - Cairo (mīqāt 439). Commentary on (No 1227, A1) of al-Jawlānī, written in 1654.

1229. MUHAMMAD AL-ADFINI AL-FARADI

Muḥammad ibn `Alī ibn Muḥammad al-Adfinī al-Shafi`ī al-Faraḍī (17th c.), Egyptian mathematician.

See: GAL (II 418), GAL² (II 442), OMLT (108-109), SSM (106).

M1. [Super-commentary on Commentary by al-Shinshawrī on "Gift of Lovers"] - Cairo (riyāḍa. 286). The complete list is given in OMLT. Super-commentary on commentary (No 1011, M3) by al-Shinshawri on the work (No 873, M12) of Sibṭ al-Maridīnī.

1230. IBRAHIM IBN MUHAMMAD (TEZKİRECİ KÖSE İBRAHİM)

Ibrāhīm ibn Muḥammad (17th c.), Turkish astronomer.

See: MAMS (II 625), OALT (340-345), OM (III 253), Ihsanoğlu [5].

A1. Astrolabe (Asṭurlāb) - is mentioned in OM. Treatise was written in 1687.

A2. Sajanjal al-Aflāk fi Ghāyat al-Idrāk. - is quoted in OALT.

1231. MUSA AL-ABSHADI AL-HUSAYNI

Mūsā ibn Shāhīr al-Abshādī al-Muslimī al-Ḥusaynī (17th c.), Egyptian astronomer.

See: OALT (313-314), SSM (103).

A1. Alleviating Anguish on Operations with the Solar and Lunar Eclipses (Ighāthat al-malhūf fī `amal al-khusūf wa'l-kusūf) - Cairo (mīqāt 12), Istanbul (NO 2484/3).

A2. Tanqīḥ al-afkār fi A`māl al-Layl wa al-Nahār- is mentioned in OALT.

1232. `ALI AL-UJHURI

`Alī ibn Muḥammad Zayn al-`ābidīn al-Ujhūrī (17th c.), mathematician.

See: GAL (II 413-414), GAL² (II 434), SSM (103).

M1. [Poem on Arithmetic]. Commentary on this poem: M2.

M2. [Commentary on His Poem on Arithmetic] - Cairo (riyāḍa. 1066/2).

1233. MUHAMMAD AMIN AL-`ALAWI

Muḥammad Amīn ibn Muḥammad Sa`īd al-Ṣiddiqī al-`Alawī al-Ḥusaynī (end of 17th c.); commentator of the Qur'an and mathematician, worked at the court of Mogul Emperor Awrangzeb (1658-1707).

See: MAMS (II 625), PL (I 169), PL² (151), STMI (405); Pingree [6] (IV 442).

M1. Eloquence of Arithmetic (I`jāz al-ḥisāb) P - Rampur (1251; Nadhir 244). Treatise was written in 1661.

M2. [Persian Revision of Indian Algebraic Treatise "Bijaganita" of Bhaskara II] - is mentioned by Pingree.

1234. `ABDALLAH AL-MUNAWI

`Abdallāh ibn Aḥmad al-Munāwī al-Shāfi`ī (17th c.), Egyptian mathematician and astronomer.

See: GAL² (II 972), MAMS (III 6), OALT (284-285), SSM (103).

M1. Brilliant Stars on the Division of Inheritance (al-Kawākib al-bahiyya fī qismat al-mirāth) - Alexandria, Cairo (riyāḍa. 181/6).

A1. Rare Pearl on Timekeeping (al-Durra al-yatīmiyya fi'l-mīqāt) - Cairo (mīqāt 181). Description of the manuscript: Kunitzsch [1] (33-34).

A2. Risāla fi Rub' al-Muqanṭarat- is mentioned in OALT.

1235. MUSTAFA IBN SUHRAB

Muṣṭafā ibn Suhrāb (17th c.), Ottoman astronomer.
See: OALT (285-286), SSM (103).
A1. Tables of Fixed Stars for the Year 1061 h. (Jadāwil siḥḥītiyya li'l-kawākib al-thābita li sanat 1061) - Cairo (mīqāt 644/2, Fāḍil mīqāt 54/1). Star catalogue for 1650.
A2. Detailed Tables of Fixed Stars for the Year 1114 h. (Jadāwil siḥḥītiyya li'l-kawākib al-thābita li sanat 1114) - Cairo (Fāḍil mīqāt 36). Star catalogue for 1702.
A3. Jadāwil Siḥḥitiyāt li'l-Kawākib al-Thābita li sana 1114 -. is mentioned in OALT.

1236. MEDNI MAL NARAYAN

Medni Mal ibn Dharam-Das Narāyān ibn Kalyān-Mal Kāyath Saksena (17th c.), Indian mathematician.
See: MAMS (II 625), PL (II 16), STMI (410).
M1. Unicum of Sciences (Badāī'-i funūn) P - Calcutta (701, 1497), Hyderabad (riyāḍa. 155, 312; Osm. 2321; Said. 21), London (Ind. 2259), Paris (2178 - incomplete). Arithmetic treatise based on Indian treatise "Lilawati", written in 1664.
M2. Collection of Siyaq (Majmū'a siyāq) P - Hyderabad (riyāḍa. 314). Arithmetic treatise.

1237. HASAN AL-'UJAYMI

Ḥasan ibn 'Alī ibn Yaḥyā ibn 'Umar al-'Ujaymī al-Makkī al-Ḥanafī (d. 1701) from Mecca; mathematician.
See: MAMS (II 625), OMLT (164-165).
M1. Treatise on a Problem of the Science of Arithmetic (Risāla fi mas'ala min 'ilm al-ḥisāb) - Berlin (5999). Description of the manuscript: Ahlwardt [1] (347). Commentary on the work (No 1066, M1) of al-Ansārī al-Makkī.

1238. SAYYID SUBHAN MUHAMMAD

Sayyid Subḥān Muḥammad Bahādur-khān (1680-1702), Hoshtarhanid ruler in Transoxania, astronomer.
See: MAMS (II 626).
A1. Core of "Radiance of the Moon on Choice" (Lubb-i Lawā'iḥ al-qamar fi ikhtiyā-rāt) P - Tashkent (1205). Description of the manuscript: SVR (VII 266). Revision of the work (No 898, A1) of al-Kashifī.

1239. AHMAD AL-SALANIQI MUNAJJIM-BASHI (MÜNECCİMBAŞI AHMED DEDE)

Aḥmad Dede ibn Luṭfallāh al-Salānīqī al-Mawlawī al-Ṣiddiqī Munajjim-bāshī (d. 1702), from Thesalonika, chief astronomer (munajjim-bāshī) of Ottoman Sultan Murad IV (1623-1649), Ottoman historian and physician.
See: AGL (633), GAL² (II 637), GOW (No 234-235), MAMS (II 626), OALT (360-361), OM (III 142-144); Kramers [1] (EI).

1240. ISMA'IL KHATUNABADI

Sayyid Amīr Ismā'īl Ḥusaynī Khatūnābādī Iṣfahānī Mudarris (1622-1705), from Khatunabad, madrasa teacher (mudarris) in Isfahan; mathematician and astronomer.
See: MAMS (II 626), PL² (1351).
A1. [Treatise] on the New Year (Nawrūziyya) P - Tehran (3053).

1241. MUHIBBALLAH AL-BIHARI

Muḥibballāh ibn 'Abd al-Shakūr al-'Uthmānī al-Ṣiddiqī al-Ḥanafī al-Bihārī (d. 1707), Indian philosopher, born in Bihar; was judge in Lucknow.
See: STMI (494-495).

Ph1. Treatise on the Indivisible Particle (Risālat juz' lā yatajazza') - Calcutta (Buhar 463/7), London (Ind. 581/9).
Ph2. [Treatise on Motion] - London (Ind. 581/5).
Ph3. [Treatise on Time] - London (Ind. 581/6).

1242. AHMAD AL-HANAFI

Aḥmad al-Māmī al-Ḥanafī (17-18th c.), astronomer.
See: GAL² (II 218), MAMS (II 626).
A1. Commentary on "Al-Zīj of Sanjaqdar" (Sharḥ Zīj Sanjaqdār) - Princeton (Yehuda 211/1, 786/1). Commentary on al-Zīj (No 1169, A1) of al-Tunīsī.
A2. [Commentary on "Treatise on the Sine Quadrant"] - Rabat (451/4). Commentary on the work (No 775, A5) of al-Maridīnī.

1243. RIDWAN AL-RAZZAZ

Riḍwān Efendī ibn `Abdallāh Abḥarī al-Jānī al-Falakī al-Razzāz al-Miṣrī al-Munajjim (d. 1711), Ottoman astronomer (al-falakī) and astrologer (al-munajjim); worked in Egypt.
See: GAL (II 471), GAL² (II 487), MAMS (II 525-627), OALT (377-384), SSM (107-108), STMI (351).
A1. Result of Reflections on Operations [of Timekeeping] at Night and Day (Natījat al-afkār fī a`māl al-layl wa'l-nahār) - Berlin (5710), Cairo (mīqāt 520, 700, 776/2 - a fragment, 1206/1, Fāḍil mīqāt 49, 152, Taymūr riyāḍa. 276), Hyderabad (Said hay'a 10), Leiden (2806 - incomplete). Description of the Berlin manuscript: Ahlwardt [1] (180-181).
A2. Separate Pearls on New Observations (al-Durr al-farīd `alā'l-raṣd al-jadīd) = Threaded Pearls on the Art of Ephemerides (al-Durr al-naẓīm fī ṣinā`a al-taqwīm) - Cairo (Fāḍil mīqāt 83, Taymūr riyāḍa 188), Istanbul (NO 2912). Al-Zīj for the latitude of Cairo based on parameters of Ulugh Beg (No 816, A1).
A3. Rules of Principles of the Science of Timekeeping and Result of Considering the Description of Times (Dastūr uṣūl `ilm al-mīqāt wa natījat al-naẓar fī taḥrīr al-awqāt) - Cairo (falak 4529, mīqāt 189, 403, 757, 1116, Fāḍil mīqāt 87, Ṭal`at mīqāt 141, Taymūr riyāḍa. 116, Zaki 97/1).
A4. Tables of Oblique [Sundials] (Jadāwil al-munḥarifāt), - Cairo (Fāḍil mīqāt 85/2).
A5. Aim of Asking about the Construction of Sundials (Bughyat al-sā'il fī waḍ` al-mazāwil) - Cairo (mīqāt 695, Ṭal`at mīqāt 102/1, Taymūr riyāḍa. 259), Princeton (Yehuda 529).
A6. [Tables for Vertical and Horizontal Sundials] - Cairo (Fāḍil mīqāt 191/2). Tables for the latitude 31°25' of Damietta.
A7. [Tables for Drawing Sundials] - Cairo (Fāḍil mīqāt 184/3). Tables for the latitudes 31° and 31°25' of Alexandria and Damietta .
A8. [Table for Drawing Line of the Prayer `Aṣr] - Cairo (mīqāt 44/2). Table for the latitude 21° of Mecca.
A9. [Prayer tables] - Cairo (mīqāt 44/1). Table for the latitude 21° of Mecca.
A10. Aim of the Pupil in Determining Astronomical Operations by Reckoning (Bughyat al-ṭālib fī istikhrāj al-a'māl falakiyya bi'l-ḥisāb) - Cairo (falak 4024/3)
A11. Rare Pearls on Ephemerides of Planets (al-Durr al-yatīm fī taqwīm al-nujūm) = The Highest of Gifts for Ephemerides of Planets (Asnā al-mawāhib li taqwīm al-kawākib) - Cairo (mīqāt 802), Hyderabad (Said hay'a 27), Istanbul (NO 2896), Paris (2537-2538), Princeton (Yehuda 3475). Revision of Ulugh Beg's al-Zīj (No 816, A1) re-calculated for the latitude of Cairo.
A12. Table of Ephemerides of the Sun for the Longitude of Mecca (Jadwal taqwīm al-shams li ṭūl Makka) - Leiden (2369).
A13. Useful Al-Zīj Based on Principles of New Observation (al-Zīj al-mufīd `alā uṣūl al-raṣad al-jadīd) - Cairo (falak 3771/1, 3985, mīqāt 1205/1), Princeton (1104). Revision of Ulugh Beg's al-Zīj (No 816, A1).
A14. [Tables for the Sun and the Moon] - Cairo (falak 4012). Tables of movement of the Sun and the Moon by parameters of al-Zīj (No 816, A1) of Ulugh Beg.
A15. First Support of Generosity of Knowledge in the Science of Determining Time and Qibla in Daghistan (`Umda ūlā li nadā al-`irfān fī `ilm al-mīqāt wa'l-Qibla bi Dāghistān) - Baku (B 2791/6), Mahachqala (185/3, 226/3, 1183/1, 1202/1), St. Petersburg (B 3947). The work was written for Daghistani scholar Muḥammad ibn Muḥammad al-Karakhī, during his stay in Egypt.
A16. Al-Zīj for the Longitude of Cairo (Zīj li ṭūl Miṣr al-Qāhira) - al-Manṣūra (35/1).

A17. [Astronomical Tables] - Cairo (falak 3978). Various tables from al-Zījes of Ibn al-Shāṭir (No 750) and al-Razzaz himself.

A18. Treatise on Astronomy (Risāla fī'l-hay'a) - Zakataly (249/2).

A19. [Tables for the Longitude of Medina] - Cairo (Zaki 97/2).

A20. [Star Catalogue for 1579] - Cairo (falak 4039, mīqāt 746/4, 107/2, Fāḍil mīqāt 73).

A21. Speech on Kaf on Determining Conjunctions, Oppositions, and Solar and Lunar Eclipses (Kalām kāf fī ma`rifat al-ijtimā` wa'l-istiqbāl wa'l-kusūf wa'l-khusūf) - Cairo (falak 4019/1). Treatise contains information on the eclipse of 1676. The words "Speech on Kaf" mean that in this treatise, the rhymes on letter "kāf" are used.

A22. Rules of [Obtaining] Result of Introduction on Operations of the Science of Timekeeping (Dastūr natījat al-muqaddima fī a'māl `ilm al-mīqāt) - Cairo (mīqāt 639/3). Treatise in 5 chapters.

A23. Specimen of Pearls on the Visibility of the Crescent and Operation with the Moon (Ṭirāz al-durar fī ru'yat al-ahilla wa'l-`amal bi'l-qamar) - Cairo (falak 4021/1, mīqāt 639/28).

A24. [Tables of Transit of the Moon in Oblique Sphere, Declinations of the Moon and Halfs of Arcs of its Visibility for Each Degree of Lunar Longitude] - Cairo (falak 4021/2).

A25. [Tables for the longitude of Medina] - Cairo (Zaki 97/2).

A26. Brilliant Jewel and General Result (al-Jawāhir al-lāmi`a wa'l-natīja al-jāmi`a) - Hyderabad (Said hay'a 29). Astronomical tables.

G1. [Table of Latitudes and Longitudes of Cities] - Cairo (mīqāt 806).

1244. MUHAMMAD AL-NAJAMI

Muḥammad al-Najāmī (17th c.), Egyptian astronomer, pupil of al-Razzāz (No 1243).
See: SSM (109).

A1. [Tables for Sundials] - Cairo (Fāḍil mīqāt 85/2). Tables for various inclinations of sundials for latitudes 30° and 31° computed jointly with al-Razzaz (No 1243).

1245. MUHAMMAD IBN AL-JUNDI

Muḥammad ibn `Abd al-Raḥmān ibn Aḥmad ibn al-Jundī (17th c.); Ottoman astronomer, worked in Egypt.
See: OALT (315), SSM (109).

A1. Sufficient for Friends on Knowledge of Times by Reckoning (Kifāyat al-aḥbāb fī ma`rifat al-awqāt bi'l-ḥisāb) - Cairo (mīqāt 629). Treatise was written in 1680.

1246. `ABD AL-MU`TI AL-SIMILLAWI

`Abd al-Mu`ṭī ibn Sālim ibn `Umar ibn al-Shiblī al-Simillāwī al-Qādirī al-Azharī al-Miṣrī al-Shāfi`ī (d. 1715), Ottoman astronomer, worked in Egypt.
See: OALT (386-387), SSM (109).

A1. Treatise on Lunar and Solar Eclipses, Thunder, Earthquake, Lunar Circle, and the New Year (Risāla fī khusūf al-qamar wa kusūf al-shams wa'l-ra`d wa'l-zalzala wa dā'irat al-qamar wa'l-nayrūz) - Cairo (Taymūr ghayb 133).

1247. MUHAMMAD IBN `ABD AL-MAHMUD AL-LADHIQI

Muḥammad ibn `Abd al-Maḥmūd al-Ḥakīm al-Lādhiqī (17th c.), from Ladhiqiya (ancient Laodicaea), astronomer.
See: SSM (109).

A1. Limit of Simplification of Explanation and Abridgement of the Limit of Ephemerides of Planets (Nihāyat al-tashīl li'l-`ibāra wa'l-ikhtiṣār li'l-ghāya li taqwīm al-kawākib al-sayyāra) - Cairo (Ṭal`at mīqāt 92). Al-Zīj for Lādhiqiya was based on the work (No 283, A11) of al-Ṣadafī and tables of al-Razzāz (No 1243).

1248. `ABD AL-MAJID AL-SAMULI AL-SU`UDI

`Abd al-Majīd al-Sāmūlī al-Hindī (17th c.), from India, mathematician.
See: GAL² (II 1018), MAMS (III 7-8), SSM (104).

M1. Open Doubts on the Situation of those who Research the Hidden (Kashf al-rayb `an ḥāl al-mutajassisīn `alā'l-ghayb) - Berlin (4077).

M2. [Mathematical Treatise in 3 Books] - Cairo (Taymūr riyāḍa. 314). Second Book on Rules by which the Required Unknown is Determined by the Given Known (al-Maqāla al-thāniya fī'l-qawānin allatī yustakhraju bihā al-majhūl al-maṭlūb min al-ma`lūm al-mafrūḍ) - Berlin (IGMN IV, 3). Other separate books of the same treatise - Cairo (falak 3831/4, Ṭal`at riyāḍa. 113,). Description of the Berlin manuscript: Ruska and Hartner [1] (223). Book II in 2 chapters: on determining the unknown, by proportions and algebra.

A1. [Treatise on Astronomy and Astrology] - Gotha (1397).

Me1. Treatise on the Science of Lever Balance (Risāla fī `ilm al-qabbān) - Cairo (riyāḍa. 13)

1249. QASIM AL-KHANI

Qāsim ibn Ṣalāḥ al-Khānī (17th c.), Ottoman scholar from Aleppo.

See: GAL (II 452), OALT (359-360), SSM (105).

M1. [Commentary on "Sufficient"] - Cairo (Taymūr majlis 196/15). Commentary on poem (No 783, M7) of Ibn al-Haim.

A1. [Treatise on Astronomical Terminology] - Cairo (Taymūr majlis 196/18).

1250. `ALI AL-MAR`ASHI

`Alī ibn Faḍlallāh ibn Muḥammad al-Mar`ashī al-Shāfi`ī (d. 1722), astronomer, knowledgeable in fiqh and logic.

See: GAL (II 471), OALT (394-395), MAMS (II 628).

A1. Treatise on Almucantar Quadrants and Timekeeping (Risāla fī rub` al-muqanṭar fī'l-mīqāt) - Alexandria (funun 101/10). Treatise was written in 1719.

A2. Stair of Heaven and Horizons on the Sine Quadrant (Sullam al-samā' wa'l-āfāq fī'l-rub` al-mujayyab) - Alexandria (funun 101/11). Treatise was written in 1728.

1251. `ABD AL-RAHIM AL-MAR`ASHI (ABDURRAHİM AL-MAR'AŞİ)

`Abd al-Raḥīm (`Abd al-Raḥmān) ibn Abī Bakr al-Mar`ashī) (d. 1736), Turkish theologian and mathematician.

See: GAL² (596), KZ (VI 608), OM (III 285-286), MAMS (II 596), OMLT (180-184), SSM (164).

M1. Commentary on the Treatise of Bahā' (al-Dīn) (Sharḥ al-risāla al-Bahā'iyya) - Baghdad (2950), Cairo (`aqaid 3488/3, riyāḍa. 644, 649/1, 1104, Kavala riyāḍa. 112, Zaki 574). The complete list is given in OMLT. Commentary on the work (No 1058, M1) of al-`Āmilī.

M2. Order of Division of Inheritances by the Method of a Shafi`i Imam (Tartīb al-aqsām `alā madhhab al-imām al-shāfi`ī) - is mentioned in OM.

1252. AHMAD `AYYAD AL-MAHALLI

Aḥmad ibn Muḥammad `Ayyad al-Maḥallī (17-18th c.), Egyptian timekeeper and astronomer.

See: OALT (411-412), SSM (109).

A1. Simplification of the Required for Equation of Planets (Tashīl al-maṭālib fī ta`dīl al-kawākib) - Cairo (Fāḍil mīqāt 23/1, Taymūr riyāḍa. 49).

Al-Zīj for Cairo based on the work (No 696, A3) of Ibn al-Banna.

A2. [Commentary on the Treatise on the Astrolabe] - Cairo (falak 4007/1, - anonymous, mīqāt 41/1 - there is only first page). Commentary on the work (No 1176, A3) of al-Rudānī.

1253. MUHAMMAD AL-GHUMRI

Muḥammad al-Ghumrī al-Shāfi`ī al-Ash`arī al-Falakī (d. 1712), Egyptian mathematician and astronomer.

See: GAL (II 471), GAL² (II 487), MAMS (II 628), OALT (429-431), OMLT (190-194), SSM (110).

M1. Treatise on Properties of Operations for Determining the Unknown [Quantities] (Risāla fī kayfiyyat al-`amal fī istikhrāj al-majhūl) - Cairo (riyāḍa 1041).

M2. Arithmetic Mysteries and Inspired Rules for Determining Silver of Day (al-Asrār al-ḥisābiyya wa'l-qawā'id al-ilhāmiyya fi istikhrāj fiḍḍat al-yawm) - Cairo (falak 7583, riyāḍa. 1043). Treatise was written in 1696.

M3. Subtleties of Mysteries on Reckoning Degrees and Minutes for the Great Rotation (Raqā'iq al-asrār fi ḥisāb daraj wa daqā'iq a`ẓam dawwār) - Cairo (Fāḍil mīqāt 124). Treatise on sexagesimal arithmetic in 4 chapters, written in 1699.

A1. Gift to Pupils on Explanation of Truth of [Stars] with Tails (Tuḥfat al-ṭullāb fi bayān ḥaqīqat dhawāt al-adhnāb) - Rabat (2537). Treatise on comets.

A2. Arabization of the Year 1154 (Mu`arraba sana 1154) - Cairo (falak 4014). Almanac for 1739.

A3. Selected Ideas on Circle of Dates (al-Muqtaṭafāt al-fikriyya `ala'l-dā'ira al-ta'rīkhiyya) - Cairo (mīqāt 156, 539). Treatise on graduated circle for converting the dates in various calendars.

Me1. Arithmetic Rules for Converting Byzantine Measures to Egyptian Measures (al-Qawā`id ḥisābiyya fi taḥwīlāt al-aqyās al-Rūmiyya ila'l-aqyās al-Miṣriyya) - Cairo (Fāḍil riyāḍa 22).

Me2. Sufficient Rules for Converting four Quantities (al-Qawā`id al-muqni`a fi taḥwīlāt al-maqādir al-arba`a) - Cairo (Ṭal`at riyāḍa. 144/3). Treatise on weights and measures.

Me3. Removing the Ignorance of Ignorants in Problem on Eight-fold Quantity of the Whole (Muzīlat jahl al-jahala bi miqdār mā fi al-muthamman al-kullī min mas`ari al-mas'ala) - Cairo (riyāḍa. 1042). Treatise on weights and measures.

1254. AHMAD BISHARA AL-DIMYATI

Ahmad Bishāra al-Dimyāṭī (d. 1705), born in Damietta, Egyptian mathematician and astronomer.

See: MAMS (628), OALT (367-368).

M1. Useful on Extraction of First Side from Any [Number] Having Sides (Fawā'id fi istikhrāj al-ḍil` al-awwal min ayy muḍalla`) - Cairo (riyāḍa. 610). Treatise on the extraction of roots.

A1. Gardens of the Sun and the Moon on Operations of Reckoning Eclipses of both kinds (Riyāḍ al-nayyirayn fi `amal al-kusūfayn) - Princeton (1003).

1255. MUHAMMAD HASAN KHAN

Muḥammad Ḥasan Khān (17th c.), Indian astronomer.

See: STMI (327).

A1. Explanation of Operations with Al-Zīj (Tashrīḥ -i a`māl-i zīj) P - Rampur (1220). Treatise was written in 1669.

1256. HUSAYN AL-HATTARI

Badr al-Dīn Ḥusayn ibn Ḥasan al-Shāmī al-Hattārī al-Madanī al-Faraḍī al-Shifā`ī (d. 1717), Ottoman mathematician and astronomer, worked in Medina.

See: GAL (II 523), GAL^2 (II 543), MAMS (II 629), OALT (388-389), OMLT (166-167), SSM (104-105), STMI (398).

M1. Concise [Book] on the Science of Algebra and Almucabala (Mukhtaṣar fi `ilm al-jabr wa'l-muqābala) - Princeton (1051). Description of the manuscript: Hitti, Faris, and `Abd al-Malik [1] (339). Text-book of algebra compiled according to works of Ibn al-Hā'im (No 783) and al-Samūlī (No 1248).

M2. Heavenly Travel of Minds to the Science of Arithmetic (Mi`rāj al-albāb ilā `ilm al-ḥisāb) - Cairo (huruf 89/13), Patna (2426). Treatise in 2 chapters plus introduction and conclusion written in 1660.

A1. Easy Way in Operations with the Sine Quadrant (al-Manhaj al-Muqarrab fi'l-`amal bi'l-rub` al-mujayyab) - Cairo (huruf 89/15). Treatise in 25 chapters with prayer tables for the latitude 25° of Medina; was written in 1660 in Medina.

A2. Burning Lamp on Compiling Al-Zījes (al-Sirāj al-wahhāj fi `amal al-azyāj) - Cairo (huruf 89/12), Leiden (2538). Treatise in 40 chapters with prayer tables for the latitude 25° of Medina.

A3. Support for Pupils on the Construction of the Astrolabe (`Umdat al-ṭullāb fi `amal al-asṭurlāb) - Cairo (huruf 89/11). Treatise in 20 chapters containing prayer tables for the latitude 25° of Medina.

A4. Signs of Proofs on Operations with the Almucantar Quadrant (al-Āyyat al-bayyināt fi'l-`amal bi rub' al-muqanṭarāt) - Cairo (huruf 89/14). Treatise in 17 chapters containing prayer tables for the latitude 25° of Medina.

1257. MUHAMMAD IBN MUHAMMAD SA`ID

Sheikh Muḥammad ibn Sheikh Muḥammad Sa`īd (17-18th c.), worked in India at the court of Mogul Emperor Awrangzeb (1658-1707).

See: MAMS (II 629), STMI (420).

M1. Commentary on Treatise of Siraj al-Dīn (Sharḥ al-Sirājiyya) - Calcutta (1479).

Description of the manuscript: Hidāyat Ḥusayn [1] (180). Commentary on the work (No 527, M8) of al-Sajawandi, dedicated to Emperor Awrangzeb .

1258. MUHAMMAD HUSAYN AL-BIJAPURI

Muḥammad Ḥusayn ibn Khalīlallāh ibn al-Qāḍī Aḥmad ibn Abī Muḥammad al-Naiṭī al-Bījapūrī (d. 1698) was born in Bijapore; Indian astronomer. He was appointed to the madrasa in Bidar as principal by Emperor Awrangzeb in 1686.

See: STMI (326-327).

A1. Rough Draft on the Quadrant (Ujālat al-rub`) - Hyderabad (Said. hay'a 18, 20).

1259. MUHAMMAD ZAMAN DIHLAWI

Muḥammad Zamān ibn Muḥammad Ṣādiq ibn Abī Yazīd Anbālajī Dihlawī Shāfi`ī Ḥanafī (17-18th c.), born in Anbala, India; worked in Delhi; mathematician and astronomer.

See: MAMS (II 629), PL (II 12, 17, 92-93), STMI (328, 408).

M1. Aim of Aspiration of Reckoners (Ghāyat-i juhd al-ḥussāb) P - Hyderabad (Osm. 1170), Patna (1035), Rampur (1234-1235). Commentary on the work (No 1058, M1) of al-`Āmilī written in 1718.

M2. Treatise on the Height of Mountains (Risāla-yi irtifā` al-jibāl) P - Hyderabad (riyāḍa 70).

M3. Exposition of Propositions on Resolving [Difficulties] of Commentary by al-Ṭūsī on "Substantial Propositions" (Taḥrīr-i ashkāl al-ḥall sharḥ-i Ashkāl al-ta'sīs li'l-Ṭūsī) - Rampur (1162). Super-commentary on commentary (No 606, M24) by al-Ṭūsī on the work (No 655, M1) of al-Samarkandī.

A1. Treatise on Astronomy (Risālat dar hay'at) P - Paris (2370/2), written in 1708.

A2. Commentary on "Al-Zīj of Ulugh Beg" (Sharḥ-i zīj-i Ulugh Beg) P - Calcutta (1498). Commentary on the al-Zīj (No 816, A1) of Ulugh Beg.

A3. Mathematical Wisdom (Ḥikmat al-riyāḍī) P - Aligarh (Azad `Abd al-Ḥayy 121/14), Calcutta (1173-1174, 1498). Commentary on "Compendium" of al-Jaghmīnī (No 547, A1), written in 1708.

1260. SIDI `ABDALLAH IBN HAMZA

Sīdī `Abdallāh ibn Ḥamza (17-18th c.), astronomer.

See: MAMS (II 629).

A1. On Altitude (Fī 'l-irtifā`) - Fas (Zāwiya 8a).

A2. Commentary on "Sufficient" (Sharḥ al-Muqni`) - Fas (Zāwiya 7a). Commentary on the work (No 1166, A1) of al-Marghīthī.

1261. `ABD AL-FATTAH AL-DAYSATI

`Abd al-Fattāḥ ibn Ibrāhīm al-Daysaṭī al-Mālikī (17-18th c.), astronomer, pupil of al-Razzāz (No 1243).

See: GAL² (II 1017), MAMS (II 630), OALT (514), SSM (108), MAMS (III 9), A2 Leiden (2808/2).

M1. True Note in Commentary to Introduction of al-Sakhāwī (al-Nubdha al-wāfiyya fī sharḥ al-Muqaddima al-Sakhāwiyya) - Cairo (riyāḍa. 900). Commentary on the work (No 1026, M1) of al-Sakhāwī.

M2. Removal of a Veil from the Face of "Aim of Pupils" (Kashf al-ḥijab `an wajh Bughyat al-ṭullāb) - Cairo (falak 4310). Commentary on the work M3.

M3. Aim of Pupils in the Science of Arithmetic (Bughyat al-ṭullāb fī `ilm al-ḥisāb). Author's commentary: (M2) Poem on arithmetic.

A1. The Nearest of Means in the Construction of Sundials (Aqrab al-wasā'il fī `amal al-mazāwil) - Cairo (mīqāt 175/6). Description of the manuscript: Kunitzsch [1] (11).

A2. The Highest Targets in the Science of Timekeeping (Asnā al-ghāyāt fī `ilm al-mīqāt) - Aleppo (Awqaf 911). Treatise contains prayer tables for Ladhiqiya, latitude 14°30'.

1262. MUHAMMAD AL-SABZAWARI

Muḥammad Bāqir ibn Muḥammad Mu'min al-Sabzawarī al-Khurāsānī (d. 1679), from Sabzawar, Khurasan; jurist and astrologer, worked at the court of Safawid Shah Sulaymān I (1666-1694).

See: GAL² (II 578), MAMS (II 630), PL (II 91-92), SSM (162), STMI (338).

M1. Commentary on "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Kabul (Muza 104). Commentary on the work (No 1058, M1) of al-`Āmilī.

A1. Book on the New Year (Nawrūz-nāma) P - Oxford (Pers. 1559). Description of the manuscript: STMI (338). Description of the manuscript: Sachau and Ethé [1] (342-343). Astronomical and chronological treatise in 3 chapters plus introduction and conclusion.

A2. Opening Mysteries on Sciences of Stars and Talismans (Kashf al-asrār fī `ilm al-nujūm wa'l-ṭilismāt) P - Oxford (1560).

A3. Treatise on Investigation of Days [and Nights] and Blessed, Lucky, and Unlucky Days (Risāla dar taḥqīq-i ayyām wa rūzhā-yi mubārak u mas`ūd u manḥūs) P - Bombay (Firuz 30), Oxford (2559).

A4. Treatise on the Azimuth of Qibla (Risāla fī samt al-Qibla) - Hyderabad (riyāḍa. 214).

A5. Treatise on Causes of Movement of the Sun and Immobility of the Earth (Risāla fī ithbāt ḥarakat al-shams wa sukūn al-arḍ) P - Cairo (mīqāt fārisī 9).

1263. `ABDALLAH KURAYSHI

`Abdallāh ibn Muḥammad Wāhid ibn Sheikh Imām Kurayshī (17-18th c.), encyclopaedist, worked under Mogul Emperor Awrangzeb (1658-1707).

See: MAMS (III 6).

E1. Rules of Two Sources (Qawā`id al-maṣdarayn) - Patna (918). The work contains chapters on grammar, rhetorics, medicine, geography, history, astronomy, and astrology.

E2. Science of Awrang-Shah (Farhang-i Awrang-Shahī) P - Calcutta (254). The work contains chapters on zoology, botany, mineralogy, meteorology and is dedicated to Mogul Emperor Awrangzeb.

1264. KHWAJA BAHADUR HUSAYN KHAN

Khwāja Bahādur Ḥusayn Khān (17-18th c.), from Bukhara; astronomer, worked in Delhi under Mogul Emperor Awrangzeb and in Deccan under Niẓām al-Dawla Chin Qylych Khān.

See: STMI (320).

A1. Nizam Al-Zīj (Zīj-i Niẓāmī) P - Hyderabad (riyāḍa. 112).

A2. Commentary on "Nizam Al-Zīj" (Sharḥ-i Zīj-i Niẓāmī) P - Hyderabad (riyāḍa. 296).

1265. RUSTAM AL-HAWAFI

Rustam ibn Shāhwardī Zanjānī al-Hawāfī (17-18th c.), from Zanjan, mathematician and astronomer.

See: GAL² (II 591), MAMS (II 630).

M1. Treasury of Proof in Algebra and Almucabala (Kanz al-burhān fī'l-jabr wa'l-jabr wa'l-muqābala) - Mashhad (147).

A1. The Right Way in Determining the Azimuth of Qibla by Indian Circle (al-Sirāṭ al-mustaqīm fī istikhrāj samt al-qibla bi'l-dā'ira al-hindiyya) - Mashhad (134).

1266. MUHAMMAD IBN ZABARDAST KHAN

Ṣadr al-Dīn Muḥammad ibn Zabardast Khān (17-18th c.), Indian mathematician, astronomer, and poet. He wrote in Persian and Urdu.

See: MAMS (II 630-631), PL (I 1093, II 12, 93, 398-399, III 344-345), PL2 (639-640).

M1. Exposition of Sadr [al-Dīn] (Taḥrīr al-Ṣadr) - Lahore (Univ. 14). Commentary on the work (No 1058, M1) of al-`Āmilī written in 1723.

A1. Star of Sadr [al-Dīn] (Najm al-Ṣadr) - Lahore (Univ.). Treatise on astronomy and astrology written in 1723.

Z1. Gift of Sadr [al-Dīn] (Tuḥfat al-Ṣadr) P. Edition with English notes: Ibn Zabardast Khān [1]. Treatise on horses "faras-nāma", in 20 chapters plus introduction and conclusion.

L1. [Masnawi] U. - French translation: Garcin de Tassy [1] (436-438).

1267. ISMA`IL AMIDI

Ismā`īl ibn Sayyid Ibrāhīm al-`Āmidī (17-18th c.), Ottoman mathematician and astronomer; served as a judge in Medina.

See: MAMS (II 631), OALT(385), OM (III 253).

A1. Essence of Operations in the Construction of the Northern Astrolabe (Zubdat al-a`māl fī `amal asṭurlāb al-shimāl) - is mentioned in OM.

1268. AHMAD AL-BAHRANI

Aḥmad ibn Ibrāhīm ibn Aḥmad al-Baḥrānī (d. 1719), from Bahrain; knew metrology well.

See: MAMS (II 631).

Me1. Treatise on Weights and Magnitudes (Risāla fī'l-awzān wa'l-aqdār) - Princeton (Yehuda 119).

1269. `ABD AL-RAHMAN AL-MANZILAWI AL-QUDDUSI

`Abd al-Raḥmān ibn Muḥammad ibn Muḥammad al-Manzilāwī al-Quddūsī (17-18th c.), Ottoman astronomer, pupil of al-Razzāz (No 1243).

See: OALT (513), SSM (108).

A1. Table of Fixed Stars for the Year 1111 h. (Jadwal al-kawākib al-thābita li sanat 1111) - Cairo (mīqāt 669). Star Catalogue for 1699.

1270. QUTB AL-DIN LAHIJI

Quṭb al-Dīn Muḥammad ibn Sheikh `Alī Sharīf Lāhījī Daylamī (17-18th c.), from Daylam, North-West Iran; worked under Safawid Shah Sulaymān I (1666-1694).

See: MAMS (II 631), PL (II 92).

M1. Subtleties of Arithmetic (Laṭā'if al-ḥisāb) - Mashhad (5609).

A1. Treatise on Astronomy (Risāla dar hay'at) P - Paris (2368/1). Treatise in 5 books plus introduction and conclusion, dedicated to Shah Sulaymān.

1271. AHMAD AL-KHATUNABADI

Aḥmad ibn Muḥammad al-Mahdī al-Sharīf al-Iṣfahānī al-Khātūnābādī (17-18th c.), from Isfahan, mathematician and astronomer.

See: MAMS (II 631), SSM (162), STMI (290), TIFI (307).

M1. Treatise on Arithmetic (Risāla fī'l-ḥisāb) - Baghdad (2940), Cambridge (Sup. 3700/8).

A1. Treatise on Stars (Risāla dar nujūm) P - Shiraz (Shahchirag).

A2. Knowledge on the Calendar (Ma`rifatt-i taqwīm) P - Cairo (Ṭal`at mīqāt 227/3), Cambridge (Sup. 659), Istanbul (NO 2517/3; SM Esat 1975), Mashhad (Gauharshad 1680/1). Treatise in 12 chapters written in Karbala in 1714.

1272. AHMAD EFENDİ BRUSI (İSHAK HOCASI)

Isḥāq Khwājasī Aḥmad Efendī Brusī (d. 1710), from Bursa (Turkey); theologian, astronomer and mathematician.

See: GAL² (I 511), MAMS (II 631-632), MAMS (III, 13), OALT (372 -376), OM (I 232-233, III 357-358), SSM (174)

A1. Treatise on the Quadrant of Circle (Risāla-yi rub`i dā'ira) = Treatise on Operations with the Almucantar Quadrant (Risāla fi'l-`amal bi'l-rub` al-muqanṭar) T - Cairo (Fāḍil mīqāt turkī 5/1 under the first title); the second title is given in OALT.

A2. Practical Treatise on Explanation of Shadow, and Determining Sides and the Qibla by Circle (Risāla ma`mūla fī bayān al-ẓill wa taḥdīd al-jihāt wa ta`yīn al-Qibla bi'l-dā'ira) T -Bursa (Haraççıoğlu 1165/2), Cairo (Fāḍil mīqāt turkī 5/2), Istanbul (SM Esad Efendi 3536/3, 576/2, Fatih 5319/8, Laleli 2727/2, BU Veliyuddin 2283/4, 2305/8; Univ. TY. 1749/2), Konya (Mevlana Müzesi 2905/2)

A3. Explanation of the Indian Circle (Dā'ira hindiyya sharḥī) T - is mentioned in OM.

A4. Treatise on Altitude (Risāla-yi irtifā`) T - is mentioned in OM.

1273. MUHAMMAD `ALI RIYADAI MUHANDIS

Muḥammad `Alī Riyāḍī Muhandis ibn Khayrallāh Khān ibn Luṭfallāh Khān Muhandis (18th c.), son of Luṭfallah al-Muhandis al-Lāhūrī (No 1178) and grandson of Ahmad al-Lāhūrī (No 1106); Indian mathematician and astronomer.

See: STMI (325).

A1. Introduction to the Calendar (Muqaddimat al-Taqwīm) - Aligarh (Azad Habib 44/9-10).

1274. MUHAMMAD SALAH AL-HUSAYNI

Muḥammad Ṣalāḥ al-Ḥusaynī (18th c.), astronomer.

See: STMI (328).

A1. Legal Calendar (Taqwīm-i shar`ī) P - Hyderabad (Salar hay'a 3). Treatise was written in 1724.

1275. MUSA AL-GHUMRI

Mūsā ibn Muḥammad ibn Mūsā al-Qulaybī al-Mālikī al-Ghumrī (17-18th c.), Egyptian astronomer and astrologer, author of treatises on astrology and magic.

See: GAL² (II 487), SSM (110).

A1. Rule for Predicting Future Events (Qā`ida yu`rafu minhā al-ḥawādith fī mustaqbal al-zamān) - Cairo (mīqāt 79/1).

1276. MUHAMMAD BAKRANI

Ḥakīm Muḥammad Bakrānī (17-18th c.), astronomer.

See: STMI (312).

A1. Supplement to Conjunction of Muḥammad Bakrani (Tatimma-yi Qirānat-i Muḥammad Bakrānī) P - Patna (11/6a).

1277. MUHAMMAD AL-QUDUQI

Ḥājjī Muḥammad Efendī ibn Mūsā al-Quduqī (al-Qudutqlī) al-Awarī (Kudutlinskiy) (1633-1708 or 1717), born in Qudut (Quduq) in Daghistan; scholar-encyclopaedist, pupil of Sha`bān al-Ubudī, `Alī Riḍā al-Sughrāṭī, and al-Tindī in Daghistan, and of Salih ibn Hamdallah al-Maqbali al-Yamani (d. 1698) in Arabia; author of treatises on mathematics, astronomy, grammar and logic; had many pupils in Daghistan and in other countries of Northern Caucasus and also in Tatarstan; he died in Aleppo.

See: GAL² (I 504, 964), MAMS (II 632); Alqadari [1] (232-234), [2] (147-148), Kaymarazov [1] (31), Saidov [1] (119-120).

A1. [Commentary on "First Support of Generosity of Knowledge in the Science of Determining Time and Qibla in Daghistan"] - Mahachqala (185, on margins). Commentary on the work (No 1243, A15) of al-Razzāz.

L1. Super-commentary on Charpardi (Ḥāshiya `alā'l-Charpardī) - al-Quduqī [1]. Super-commentary on commentary by Charpardī on the treatise of ibn al-Ḥājib (1174-1249) (See: GAL (I 367-373), GAL^2 (I 531-539) - on Arabic grammar.

1278. AMIN AL-DIN KHAN HUSAYNI HARAWI

Amīn al-Dīn Khān ibn Abī'l-Makārim ibn Amīr Khān Ḥusaynī Harawī (17-18th c.), from Herat, Indian geographer and encyclopaedist, worked under Mogul Emperor Awrangzeb (1658-1707).
See: PL (II 142, 361-362).
E1. Sprays of Sciences (Rashaḥāt al-funūn) P - Bombay (Firuz 49), Hyderabad (falsafa 1395), London (1055/1), Manchester (491), Patna (152).
G1. Known on Horizons (Ma`lūmāt al-āfāq) P - London (1013/2; Ind 1538), Oxford (1332). Editions: Husayni Harawi [1]. Illustrated geography.

1279. HASAN IBN JAHHAF

Ḥasan ibn Zayd ibn `Alī ibn Ibrāhīm Jaḥḥāf (1683-1716), Yemeni astronomer, great-grandson of Ibrāhīm Jaḥḥāf (No 1124), worked in Sana'a.
See: MAY (60).
A1. Treatise on the Science of Timekeeping and Beginnings of Months (Risāla fī `ilm al-mīqāt wa madākhil al-shuhūr) - Sana'a (Grand Mosque majlis 64).

1280. AL-HUSAYN IBN JAHHAF

al-Ḥusayn ibn Zayd ibn `Alī ibn Jaḥḥāf (17-18th c.), Yemeni astronomer, brother of Hasan ibn Jaḥḥāf (No 1279).
See: MAMS (III 45), MAY (46-47, 69-70).
A1. Book of Sapphires on the Knowledge of Timekeeping (Kitāb al-yawāqīt fī ma`rifat al-mawāqīt) - Berlin (5784), Leiden (Landberg-Brill 445).

1281. DAMADAN AL-MUHI

Damadān ibn Ya`qūb al-Muḥī (Muginsky or Mögöbsky) (d. 1718), born in Möhöb in Daghistan ("Möhöb" is the Avari name of this village founded by Lezgis in the Avari region of Daghistan, its Lezgi name is "Muhi"); mathematician, astronomer, physician. He translated al-Birjandī's commentary (No 938, A1) on the introduction of al-Zīj (No 816, A1) of Ulugh Beg from Persian.
See: MAMS (II 632-633); Alqadari [1] (234), [2] (148), Kaymarazov [1] (32), Saidov [1] (120-121).
M1. [Trigonometrical Treatise] - is mentioned by Saidov [1] (121).
M2. [Mathematical Treatise] - is mentioned by Saidov [1] as a treatise where Damadan "created a compact theory of resolution of approximate hypothetical problems".
M3. [Treatise on the Science of letters and magic squares (`ilm al-ḥurūf wa'l-awfāq)] - is mentioned by Alqadari [1] (234).
A1. Operations with the Sine Quadrant (al-`Amal bi rub` al-mujayyab) - Mahachqala (187/2).

1282. YAHYA AL-BIRSHAMSI

Yaḥyā al-Birshamsī (17-18th c.), Egyptian astronomer.
See: SSM (110).

1283. MUHAMMAD AL-KISHNAWI AL-ASH`ARI AL-SUDANI

Muḥammad ibn Muḥammad al-Fallatī al-Kishnawī al-Ash`arī al-Mālikī al-Sūdānī (17-18th c.), from Sudan, Egyptian astronomer.
See: GAL (I 669), GAL^2 (I 924), SSM (110).
A1. Threaded Pearls and Essence of the "Hidden Mystery" (al-Durr al-manẓūm wa khulāṣat al-Sirr al-maktūm) - Cairo (hay'a 14). Commentary on the work (No 535, A1) of Fakhr al-Dīn al-Rāzī.

1284. LUTFALLAH AL-HUSAYNI

Luṭfallāh Aḥmad al-Ḥusaynī (17-18th c.), mathematician.
See: MAMS (II 633), PL (II 14).
M1. Treatise on Arithmetic (Risāla dar ḥisāb) P - Mashhad (5324). Treatise was written in 1694.

1285. MUHAMMAD AL-RUSTAI

Muḥammad ibn ādam al-Rustā'ī (17-18th c.), astronomer.
See: SSM (162), TIFI (226-276).
A1. Explanation of Stars and Planets on Ephemerides and Al-Zījes (Tashrīḥ al-kawākib wa'l-sayyārāt fi'l-taqwīm wa'l-zījāt) - Cairo (mīqāt 947/4). Treatise in 10 chapters.
A2. Explanation of Stars and Planets (Tashrīḥ al-kawākib wa'l-sayyārāt) = Commentary on Pages (Sharḥ al-saḥā'if) P - Cairo (mīqāt 947/5). Treatise in 3 chapters, apparently an abridgement of A1.
A3. Division of Ephemerides in Commentary of "Guide to Astrology" (Tafṣīl al-taqwīm fī sharḥ Hidāyat al-tanjīm) - Cairo (mīqāt 947/1). Commentary on A6.
A4. Memoir for Friends on Operations with the Astrolabe (Tadhkirat al-aḥbāb fi'l-`amal bi'l-asṭurlāb) - Cairo (mīqāt 947/2). Treatise in 20 chapters.
A5. Operations with the Sine Quadrant (Miftāḥ al-mughayyab fi'l-`amal bi'l-rub` al-mujayyab) - Cairo (mīqāt 947/3). Treatise in 20 chapters.
A6. Guide to Astrology (Hidāyat al-tanjīm).

1286. HASAN TUNI

Ḥasan ibn Shujā` ibn Muḥammad al-Ḥasan al-Ḥāfiẓ al-Tūnī (17-18th c.), mathematician, astronomer, and astrologer.
See: MAMS (III 43, 44), PL (II 105), SSM (163).
M1. Treatise on the Science of Arithmetic (Risāla dar `ilm-i ḥisāb) - Patiala (1160).
A1. Indications for Astrologers (Dalīl al-munajjimīn) - Cairo (Ṭal`at falak fārisī). This works is also found at Tehran (Univ. 3076/2, Sipahsalar 1438) under the name (Dalāil al-munajjimīn).

1287. MIR HUSAYN MUBADI

Mīr Ḥusayn Mubadī (17-18th c.), judge and mathematician.
See: MAMS (II 633).
M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-Hisāb) - Mashhad (5341). Commentary on the work (No 1058, M1) of al-`Āmilī. Treatise was written in 1698.

1288. `ABD AL-RAHMAN EFENDI AL-MUHANDIS (ABDURRAHMAN EFENDİ AL-MUHANDİS)

`Abd al-Raḥman Efendī al-Muhandis (d. 1806), Turkish mathematician.
See: MAMS (II 633) OALT (557-558), OMLT (263).
M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Mashhad (7728). Commentary on the work (No 1058, M1) of al-`Āmilī. Treatise was written in 1721.

1289. HASAN IBN MUHAMMAD

Ḥasan ibn Muḥammad (17-18th c.), astronomer.
See: MAMS (II 634).
A1. Commentary on the "Explanation of Celestial Spheres" (Sharḥ Tashrīḥ al-aflāk) - Baku (B 600/1). Commentary on the work (No 1058, A19) of al-`Āmilī.

1290. HASAN AL-AID

Ḥasan ibn Muḥammad al-Aīd (17-18th c.), mathematician.

See: MAMS (II 634).

M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb li'l-`Āmilī) - Istanbul (SM AS 2746). Commentary on the work (No 1058, M1) of al-`Āmilī.

1291. MUHAMMAD ISTAMBULI

Muḥammad B. As`ad al-Yanyawī al-Islāmbūlī (Istāmbūlī) (17-18th c.), from Istanbul (Turkey), Turkish mathematician and astronomer.

See: MAMS (II 634), OM (III 257), OMLT (178-180), SSM (174).

M1. Book on Trisection of an Angle and Division of a Circle in Seven Parts (Kitāb tathlīth al-zāwiya wa tasbī` al-dā'ira) - Cairo (Fāḍil riyāḍa 41/7).

M2. Book on the Construction of Heptagon and other Polygons Inscribed in Circle (Kitāb `amal al-musabba` wa ghayrihī min dhawāt al-aḍlā` al-kathīra fi'l-dā'ira) - Cairo (Fāḍil riyāḍa 41/8).

M3. Commentary on Some Books of Euclid (Sharḥ ba`ḍ maqālāt Uqlīdis) - is mentioned in OM. The complete list is given in OMLT.

M4. Commentary on "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - is mentioned in OM. Commentary on the work (No 1058, M1) of al-`Āmilī.

A1. Fragrance of Spirit in Drawing Horary [Lines] in the Knowledge of Times (Rayḥānat al-rūḥ fī rasm al-sā`āt fī ma`rifat al-awqāt) - is mentioned in OM.

Ph1. Exposition of "Optics" of Euclid (Taḥrīr manāẓir al-Uqlīdis).

1292. `ABD AL-`AZIZ SUBHI-ZADA (SUPHİ-ZADE)

`Abd al-`Azīz Subḥī-Zāda (17-18th c.), Ra'īs al-Aṭibbā (chief of physicians) and astronomer; worked under Sultan Musṭafā II (1695-1703); Ottoman scholar, translated works (No 490, A1) of al-Bakri and (No 687, A2) of al-Khwārizmī al-Bukhārī from Persian into Turkish.

See: SSM (175).

1293. ABU BAKR `ABDALLAH

Abū Bakr `Abdallāh ibn Afīf (17-18th c.), mathematician.

See: MAMS (II 634).

M1. Book of Magnific Rules - Commentary on Hijaz Gift on Arithmetic Operations (Kitāb al-qawā`id al-saniyya - sharḥ al-Tuḥfa al-ḥijāziyya fi'l-a`māl al-ḥisābiyya) - Jakarta (Sup. 612). Commentary on the work (No 1066, M1) of al-Makki.

1294. AHMAD IBN MUHAMMAD

Aḥmad ibn Muḥammad (17-18th c.), Ottoman astronomer.

See: STMI (290).

A1. Opening Celestial Subtleties on Explanation of Fixed [Stars] that Move (Kashf daqā'iq al-falak fī taḥrīr thawābit man salak) - Hyderabad (Sa`īd hay'a 38).

1295. ABU `ABDALLAH AL-MARI`ATI

Abū `Abdallāh al-Muḥibbi al-Marī`atī (17-18th c.), astronomer.

See: MAMS (II 635).

A1. Fascinating on Commentary on "Sufficient" (al-Mumti` fī sharḥ al-Muqni`) - Berlin (5708). Commentary on the work (No 1166, A1) of al-Marghīthī.

1296. `ABD AL-SAMAD AKBAR-KHAN

`Abd al-Ṣamad ibn Qāḍī Muḥammad Akbar-khān "Khān-`Ulūm" (17-18th c.), scholar; mathematician.

See: MAMS (II 635).

M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Tashkent (6131/2, 7235/6). Commentary on the work (No 1058, M1) of al-`Āmilī.

1297. `ABD AL-JAMIL

`Abd al-Jamīl (17-18th c.), philosopher.

M1. [Treatise on Solid Particles] - Tashkent (6175/6). Description of manuscript: SVR (XI 69); Vil'danova [3] (308). Research: Rosenfeld [49-50]. Treatise on mathematical atomism.

1298. SADIQ MAWLAWI

Sadīq Mawlawī (17-18th c.), philosopher.

M1. Treatise on Research of Solid Particles (Risāla taḥqīq-i ajzā`-i jism) P - Tashkent (6175/5). Description of manuscript: SVR (XI 69); Vil'danova [3] (308). Research: Rosenfeld [49-50]. Treatise on mathematical atomism.

1299. SHAMS AL-DIN AL-HASANI

Shams al-Dīn `Alī al-Ḥasanī (17-18th c.), mathematician.

See: MAMS (II 635).

M1. [Commentary on the "Essence of Arithmetic"] - Rampur (I 46). Commentary on the work (No 1058, M1) of al-`Āmilī.

1300. `ASIMALLAH IBN `ABD AL-RASUL

Aṣimallāh ibn `Aẓīm ibn `Abd al-Rasūl (17-18th c.), astronomer.

See: MAMS (II 635).

A1. Commentary on "Explanation of Celestial Spheres" (Sharḥ Tashrīḥ al-aflāk) - Jerusalem (Yehuda 225). Commentary on the work (No 1058, A1) of al-`Āmilī.

1301. AHMAD AL-RAJI

Aḥmad ibn Ya`qūb al-Rājī (17-18th c.), astronomer.

See: MAMS (II 635).

A1. Delight of Eyes on the "Garden in Bloom" (Nuzhat al-anẓār fī Rawḍat al-azhār) - Fas (Zawiya 3). Commentary on the work (No 1166, A1) of al-Marghithi.

1302. ISMA`IL IBN AMIR

Ismā`il ibn Amīr (17-18th c.), mathematician.

See: MAMS (II 635-636).

M1. Commentary on "Essence of Arithmetic" (Sharḥ Khulāṣat al-hisāb) - Baku (B 2811, 3134). Commentary on the work (No 1058, M1) of al-`Āmilī.

1303. MUHAMMAD AMIN AL-ISKANDARI

Muḥammad Amīn ibn Muḥammad al-Iskandarī (17-18th c.), from Alexandria, mathematician.

See: MAMS (II 636).

M1. Commentary on Treatise of Baha al-Dīn on Arithmetic (Sharḥ risāla al-Bahā'iyya fī'l-ḥisāb) - Istanbul (NO 2980). Commentary on the work (No 1058, M1) of al-`Āmilī.

1304. MIRZA MUHAMMAD-BEG

Mīrzā Muḥammad Beg (17-18th c.), mathematician.

See: MAMS (II 636), PL (II 12), STMI (410).

M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Hyderabad (riyāḍa. 192). Commentary on the work (No 1058, M1) of al-`Āmilī.

1305. MUHAMMAD AL-TABRIZI

Muḥammad ibn Abī'l-Qāsim al-Tabrīzī (17-18th c.), from Tabriz, mathematician.
See: MAMS (II 636).
M1. Commentary on "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - St. Petersburg (Nat. Khān. 127). Commentary on the work (No 1058, M1) of al-`Āmilī.

1306. SAYYID `ALI KHWANSARI

Sayyid `Alī Khwānsārī (17-18th c.), mathematician.
See: MAMS (II 636).
M1. Niche of Common Sense on Commentary on the "Essence of Arithmetic" (Mishkāt al-ṣawāb fī sharḥ Khulāṣat al-ḥisāb) - Najaf (Ayatallah 1370). Commentary on the work (No 1058, M1) of al-`Āmilī.

1307. SADR AL-DIN AL-HUSAYNI

Ṣadr al-Dīn Muḥammad al-Ḥusaynī (17-18th c.), astronomer.
See: MAMS (II 636).
A1. Joy of Understanding the "Explanation of Celestial Spheres" (Tafrīḥ al-idrāk fī Tawḍīḥ al-aflāk) - Berlin (5704). Commentary on the work (No 1058, A1) of al-`Āmilī.

1308. MUHYI AL-DIN

Muḥyī al-Dīn (17-18th c.), astronomer.
See: MAMS (II 637).
A1. Commentary on the "Explanation of Celestial Spheres" of al-`Āmilī (Sharḥ-i Tashrīḥ al-aflāk-i `Āmilī) P - Baku (B 5430/4). Commentary on the work (No 1058, A1) of al-`Āmilī.

1309. SADR AL-DIN AL-HASANI

Sayyid Ṣadr al-Dīn al-Ḥasanī (17-18th c.), astronomer.
See: MAMS (II 637).
A1. Commentary on the "Explanation of Celestial Spheres" of al-`Āmilī (Sharḥ-i Tashrīḥ al-aflāk-i `Āmilī) P - Baku (B 2549), Cairo (Taymūr riyāḍa. 130/2). Commentary on the work (No 1058, A1) of al-`Āmilī.

1310. MUHAMMAD TABRIZI

Muḥammad Bāqir Tabrīzī (17-18th c.), from Tabriz, mechanician.
See: MAMS (III 29).
Me1. Weights and Magnitudes (Awzān u maqādīr) P - Tehran (Univ. Ilah. 130/6).

1311. MUHAMMAD BAQIR AL-TABIB

Muḥammad Bāqir al-Bānī al-Tabīb (17-18th c.), astronomer and physician; lived on the Ottoman and Safawid lands.
See: OALT (336-337), SSM (103).
A1. Commentary on "Explanation of Celestial Spheres" of al-`Āmilī (Sharḥ-i Tashrīḥ al-aflāk-i `Āmilī) - Cairo (Taymūr riyāḍa. 130/2), Istanbul (Univ. AY. 2466/3). Commentary on the work (No 1058, A1) of al-`Āmilī.

1312. `ABD AL-HALIM AL-QAYSARI SÖYLEMEZ-ZADA (ABDULHALİM AL-KAYSERİ SÖYLEMEZ-ZADE)

`Abd al-Ḥalīm Efendī ibn Muḥammad al-Ḥusaynī al-Qayṣarī Söylemez-Zāda (d. 1703), from Kayseri (Turkey), Turkish astronomer, worked in Istanbul under Ottoman Sultan Muṣṭafā II (1695-1703).
See: GAL² (II 1017), MAMS (II 637), OALT (362-366), OM (III 272), SSM (174).

A1. Treatise on the Astrolabe (Risāla fī'l-asṭurlāb) - Berlin (5812), Princeton (1015, Yehuda 1066). Description of the first Princeton manuscript: Hitti, Faris, and `Abd al-Malik [1] (320).

A2. Joy of Minds on (the Science of) the Astrolabe (Bahjat al-albāb fī (`ilm) al-asṭurlāb) - Alexandria (hisab 56), Cairo (Ḥalīm mīqāt 14, Ṭal`at hay'a 40/2, mīqāt 154/2, Taymūr riyāḍa. 106/9), Istanbul (SM Atıf 2788/1, Yahya Tevfik 244/5, Pertevniyal 977, Esad Efendi 3769/4, Laleli 2725/2, Yazma Bağışlar 1353/3, Hamidiye 863/1, Ayasofya 2622/4, Serez 3873/4; Arkeoloji Müzesi 1258/3), Princeton (Yehuda 4490, 4714). In addition to those stated above, 29 manuscript copies are mentioned in OALT. Treatise in 15 chapters.

A3. Treatise on the Astrolabe and Problems on the Sine Quadrant (Risāla-i asṭurlāb wa masā'il rub` mujayyab) T -is mentioned in OM. Ankara (İl Halk 1547), Istanbul (SM Fatih 5308/6, Yahya Tevfik 244, NO 2914/7), Mingana (1521/2), Princeton (2011). Treatise in 18 chapters.

1313. AHMAD AL-RASMUKI

Aḥmad ibn Aḥmad al-Rasmūkī (d. 1721), Morrocan mathematician.

See: GAL[2] (II 709), MAA[3] (182), MAMS (II 637-638).

M1. Jewels Hidden in a Shell Related to Inheritance (al-Jawāhir al-maknūna fī ṣadaf al-farā'iḍ al-mansūba) - Rabat (225).

M2. Wings of Raven on the Knowledge of Inheritance and Arithmetic (Ajniḥat al-ghurāb fī ma`rifat al-farā'iḍ wa'l-ḥisāb) - Rabat (510/3). Edition: al-Rasmūkī [1]. Supplement in 120 verses to the poem (No 947, M1) of al-Samlālī.

M3. Key to "Wings of Raven" (Miftāḥ Ajniḥat al-ghurāb) - Rabat (457). Commentary on M2.

1314. KHALIL FAID EFENDI (CABİ-ZADE HALİL FAİZ)

Khalīl Fā'id Efendī (1674-1722), Turkish mathematician and astronomer, worked in Istanbul.

See: MAMS (II 638), OALT (392-394), OMLT (168-169), OM (III 264-265).

M1. Concise Exposition of Arithmetic (Fadhlaka al-ḥisāb) - Istanbul (BU Veliyuddin 2330). The complete list is given in OMLT.

M2. From the Science of Mathematics - Arithmetic (`Ilm riyāḍīdan - ḥisāb) T - is mentioned in OM.

M3. From the Science of Mathematics - Algebra (`Ilm riyāḍīdan - jabr) T - is mentioned in OM.

A1. The Science on Stars - Astronomy (`Ilm-i nujūm - hay'at) T - is mentioned in OM.

A2. The Science on Stars - Astrology (`Ilm-i nujūm - tanjīm) T - is mentioned in OM.

A3. Fadhlaka al-Ḥisāb -Istanbul (SM Veliyuddin 2332/4, 2330, Esad Efendi 3172, Yazma Bağışlar 1304, Izmirli 474, 473, 808/10; Kandilli 68; Univ. TY. 589; Topkapı Hazine 600).

A4. al-Futūḥ al-`Alā'iyya. - Istanbul (Kandilli 377).

A5. Maqālāt al-Sayyārāt. - Istanbul (BU Veliyuddin 3204/7), Lindesiana (650).

A6. Taqwīm Sāl 1127-1128. - Istanbul (Kandilli takvimler 121).

1315. MUHAMMAD AL-DARENDEVI

Muḥammad ibn al-Ḥājj Ismā`il al-Dārendevī (17-18th c.), Turkish astronomer.

See: OALT (519), SSM (169); D'Ohsson [1].

A1. Almanac of Darendevi (Rūznāma Dārendevī) T - Cairo (Ṭal`at falak fārisī 29/2). Prayer tables for the latitude 41^{o} of Istanbul. Facsimile edition: D'Ohsson [1].

A2. Risāla fī Ma`rifat al-ālāt li Avqāt al-Salāt- Istanbul (Kandilli 2/2).

A3. Risāla fī Ma`rifat al-ālāt li Avqāt al-Salāt- Istanbul (Kandilli 2/3).

1316. MUHAMMAD AL-MAWSILI

Muḥmmad ibn Qāsim al-Mawṣilī (17-18th c.), from Mosul, astronomer.

See: MAMS (II 638), OALT (416).

A1. Commentary on Joy to them who Study the Astrolabe (Sharḥ Bahja al-ṭullāb fī'l-asṭurlāb) - Mosul (103/56/1).

Commentary on the treatise (No 1176, A2) of al-Rudani, written in 1701.

1317. MUHAMMAD MAH

Khwāja Muḥammad Māh (17-18th c.) (Māh is the Persian name of Moon); scholar, historian, mathematician, and astronomer; worked in Hyderabad.

See: MAMS (II 638-639), PL (I 134-135, II 12), PL^2 (445-446), STMI (401-402).

M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) P - Hyderabad (riyāḍa. 167). Commentary on the work (No 1058, M1) of al-`Āmilī.

M2. Mirror of Arithmetic (Mir'āt al-ḥisāb) P - Aligarh (Azad. Habib 45/6), Hyderabad (riyāḍa. 96, Salar riyāḍa. 23), Rampur (1245).

1318. MUHSIN AL-HASANI

Muḥsin al-Ḥasanī (17-18th c.), mathematician.

See: MAMS (II 639).

M1. Commentary on "Concise Exposition of Key" (Sharḥ talkhīṣ al-Miftāḥ) - St. Petersburg (A 285/4), Mashhad (Univ. 322). Commentary on the work (No 802, M1) of al-Kāshī.

M2. Propositions of Substantialization (Ashkāl al-ta'sīs) - St. Petersburg (A 265/5). Probably, revision of the work (No 655, M1) of al-Samarkandī with the same title.

M3. Arithmetic Problems the Knowledge of which is Necessary for the Reckoner (Masā'il ḥisābiyya fī ma`rifat mā yaḥtāju ilayhi al-muḥāsib) - St. Petersburg (A 265/6).

1319. QUTB AL-DIN TABATABAI YAZDI

Sayyid Quṭb al-Dīn Ṭabāṭabāī Yazdī (17-18th c.), from Yazd, mathematician.

See: MAMS (II 639).

M1. Stair of Arithmetic (Sullam al-ḥisāb) - Tehran (Univ. 1819).

1320. MUHAMMAD SALIH TABATABAI YAZDI

Muḥammad Ṣāliḥ ibn Ḥabīballāh Ṭabāṭabā'ī Yazdī (17-8th c.), from Yazd, mathematician.

See: MAMS (II 639).

M1. Essence of Arithmetic (Zubdat al-ḥisāb) P - Manchester (Lind. 699), Mashhad (Maulawi 33/5), Yazd (Jami` 1637).

1321. MUHAMMAD `ALI BIRJANDI

Mīrzā Sayyid Muḥammad `Alī ibn Ismā`īl Birjandī Qā'inī Iṣfahānī (17-18th c.), mathematician.

See: MAMS (II 639).

M1. Sine and Shadow (Jayb wa ẓill) P - Tehran (Univ. 4625). Treatise on sines and tangents.

1322. SAWAY JAY SINGH

Sawāy Jay Singhū (Jaya Simha) (1686-1743), belonged to the ruling family in Amber (India); succeeded his father Bishan Singh as maharaja in 1699. He was a distinguished Mogul officer and held the governorship of the provinces of Agra and Malwa during the reign of Emperor Muḥammad Shah (1719-1748). In 1728 he founded the modern city of Jaipur (Jayanagar). He was also an astronomer and founded the astronomical observatories in Delhi, Benares, Jaipur, Ujjayn, and Muttra (Mathura).

See: MAMS (II 539-540), PL (II 93-94), STMI (348-350, 376); Ansari [2], Blanpied [1-2], Garrett and Guleri [1], Hunter [1], Kaye [1, 3], Lane-Poole [1] (322-329), Nath Sharma [1] (ENWC), Pingree [7] (III 63-64), [14] (DSB), [60], Qary-Niyazov [6], Sarma [1], Sayılı [18] (285-288), Sen [1] (126-130), Sircar [1], Soonawala [1], Tikkimal [1].

A1. New Al-Zīj of Muḥammad-Shah (Zīj-i jadīd-i Muḥammad-shāhī) P - Aligarh (Azad Sul. 526/7), Bombay (Firuz 52, 53/2), Cambridge (Sup. 742), Dushanbe (159/1, 436, 511/2, 786; IZA 30, 198), Hyderabad (riyāḍa. 300), Jaipur (8, 94), London (143/3, 460/2, 5614), Mashhad (66353, 7700; Farhang 21/2; Mawlawi 3; Univ. 279-281), Patna (1056), Kazan (10), Rampur (1221), Tashkent (438-441, 2752), Tehran (186, 2144, 2456/1; Ma`arif 121; Sipahsalar 671-673; Univ. 2294/1).

Description of the Indian manuscripts: STMI (348-349). Description of the Tashkent manuscripts: SVR (I 230-231), description of the Tashkent manuskript 441: Qary-Niyazov [2] (304-307). Partial Russian commented translation: Babayev and Sobirov [1]. Research: Babayev and Sobirov [1], Mamedbeyli [6] (235-239). Mercier [3]. Sobirov [6].

A2. Treatise on the Astrolabe (Yantra-rāja-chanā) Sk. Description of the manuscripts: Pingree [6] (III 63-64). Editions: Jay Singh [1, 3]. English translations: Garrett and Guleri [1]. Jay Singh [2].

1323. RAMADAN AL-SAFATI AL-KHWANAKI

Ramaḍān ibn Ṣāliḥ ibn `Umar al-Safaṭī al-Khwānakī (d. 1745), Ottoman astronomer.

See: GAL (II 471-472), GAL² (II 487), MAMS (II 640-641), OALT (418-426), SSM (111).

M1. Ascent of Full Moons on Multiplication, Division, and [Extraction of] Roots (Maṭāli` al-budūr fi'l-ḍarb wa'l-qisma wa'l-judhūr) - Cairo (Fāḍil riyāḍa. 31).

A1. Right Reasoning on the Knowledge of the Ellipse of the Sun (al-Qawl al-muḥkam fī ma`rifat kusūf al-nayyir al-a`ẓam) - Cairo (mīqāt 166/1, 950, Fāḍil mīqāt 186/2). Treatise on determination of Solar eclipses, written in 1718.

A2. Known Word on Operations with Solar and Lunar Eclipses (al-Kalām al-ma`rūf fī a`māl al-khusūf) - Cairo (Fāḍil mīqāt 157, 186/1). Treatise on determination of Lunar eclipses.

A3. Delight of Soul on Ephemerides of the Sun (Nuzhat al-nafs bi taqwīm al-shams) - Cairo (falak 3984, mīqāt 195).

A4. Tables of [Movement of] the Sun (Jadāwil al-shams) - Cairo (Taymūr riyāḍa. 300/2).

A5. Sufficient for the Pupil on the Science of Timekeeping and the Aim of Learning the Knowledge of Turn and its Surplus and Azimuth (Kifāyat al-ṭālib fī `ilm al-waqt wa bughyat al-rāghib fī ma`rifat al-dā'ir wa faḍlihī wa'l-samt) - Cairo (mīqāt 114, 574), Leiden (2814). Treatise on timekeeping in 23 chapters.

A6. Various Tables (Jadāwil shattī) = Al-Zīj (al-Zīj) - Cairo (falak 4024/1, mīqāt 141/4, 535). The last title is mentioned in OALT.

A7. Gift to "Note on Aid" (al-Itḥāf `alā Nubdhat al-is`āf) - Cairo (mīqāt 525). Commentary on the work (No 888, A23) of al-Ṣūfī al-Miṣrī.

A8. Removal of Veils from Difficulties of Stars (Kashf al-ghayāhib `an mushkilāt al-kawākib) - Cairo (mīqāt 486/2, 501). Treatise on the fixed stars.

A9. Useful Note on Determining Turn, its Surplus, their Equation and the Equation of Altitude (Nubdha mufīda fī ma`rifat istikhrāj al-dā'ir wa faḍlihī wa ta`dīlihimā wa ta`dīl al-irtifā`) - Cairo (falak 4024/1).

A10. Correction of Mistakes in Determining the Arc of the Duration of the Crescent (Rashf al-zalal fī ma`rifat istikhrāj qaws makth al-hilāl) - Cairo (mīqāt 535).

A11. [Planetary Tables] - Cairo (mīqāt 706, 1197).

A12. [Tables of the Lunar Equation] - Cairo (Fāḍil mīqāt 133).

A13. Table of Fixed Stars for the Year (1139 h). (Jadwal kawākib thābita li sanat 1139) - Cairo (mīqāt 76, Ṭal`at majlis 811/12). Star catalogue for 1727.

A14. Table of the Place of Scorpius of Hour in Times of Worships (Jadwal mawqi` `aqrab al-sā`a fī awqāt al-`ibādāt) - Cairo (mīqāt 812/2, Ṭal`at majlis 811/9, mīqāt 88/2).
Prayer tables.

A15. [Tables for Sundials] - Cairo (mīqāt 498). Tables for the latitude 30° of Cairo.

A16. Bulūgh al-Watar fī al-`Amal bi'l-Qamar. - Cairo (mīqāt 19), Harput (340/7).

A17. Jadāwil Ḥisas mā bayna al-Markaz li al-Dā'ir wa ikhtilāf al-Manẓar `alā uṣūl Ulugh Beg. - Cairo (639/29).

A18. Jadāwil Maḥlūl al-Sahm `alā Uṣūl Ulugh Beg. - Istanbul (NO 2904/4).

A19. Jadāwil al-Mūl al-Thānī Daqā'iq Ulugh Beg. -Istanbul (NO 2929/4).

A20. Jadāwil awsaṭ al-Kavākib. - Cairo (Mīqāt 1193).

A21. Mu'āmarāt A`māl al-Rasm fī al-Munḥarifāt bi Uṣūl Ulugh Beg. - Istanbul (NO 2904/4).

A22. Risāla fī Ma`rifat al-Dā'ir wa Faḍlihī wa waḍ` al-Sā`āt va Khuṭūṭ faḍl al-Dā'ir `alā al-Asṭiḥa al-Muwāziya li'l-Ufuq. - Cairo (mīqāt 185).

A23. Risāla fī Faḍl Dā'ir wa'l-Basā'iṭ wa'l-Munḥarifāt. - Istanbul (NO 2923).

A24. Darajāt al-Warīfa fī Taḥrīr qisiy al-`Aṣr wa `Aṣr Abī Ḥanīfa. - Istanbul (NO 2923/5).

1324. MULCHAND PRASHAD

Mūlchand Harī Har Prashād (18th c.); mathematician, worked in Delhi under Sultan Muḥammad Shah (1719-1748), grandfather of Raja Krishna Prashad.
See: STMI (412).
M1. Book of Arithmetic (Ḥisāb-nāma) P - Hyderabad (jadid 234/1).

1325. ANAND RAM IBN HEM RAJ

Ānand Rām ibn Hem Rāj (d. 1751), Indian mathematician.
See: STMI (390).
M1. Book of Arithmetic (Ḥisāb-nāma) P - Aligarh (Azad Sul. 552/31).

1326. MUHAMMAD SALAH AL-DIN JIHANDAR-SHAHI

Muḥammad Ṣalah al-Dīn ibn Diyān-khān Jihandar-Shāhī (17-18th c.), mathematician.
See: STMI (408).
M1. Sufficient on Algebra (Kifāyat al-jabr) - Patna (1038).

1327. AS`AD EFENDI AL-YANYAWI (YANYALI ESAD EFENDİ)

As`ad Efendī ibn `Alī ibn `Uthmān al-Yanyawī (17-18th c.), Ottoman mathematician.
See: GAL² (II 665-666), MAMS (III 11), OMLT (175-176), SSM (174-175), KAYA (1).
M1. Book on the Construction of a Square Equal to a Circle (Kitāb `amal al-murabba` al-musāwī li'l-dā'ira) - Cairo (mīqāt 172/2, Fāḍil riyāḍa. 41/22). When writing the treatise on squaring the circle, he referred to the works of Archimedes.
M2. [His Translations of the Book on Philosophy from Latin dealing with Squaring the Circle] - Cairo (Taymūr riyāḍa. 140/16 - a fragment).

1328. IBRAHIM MUTAFARRIQA (MÜTEFERRİKA)

Ibrāhīm Mutafarriqa (ca 1675-1747), born in Kolozsvar, Hungary; was taken prisoner by the Turks; converted to Islam in 1693; Ottoman geographer, historian, and engineer; founder of the first Muslim printing-house in the Ottoman Empire where many works of Ḥājjī Khalīfa (No 1145) were printed.
See: AGL (634-640), MAMS (II 641), OALT (415-418); Berkes [1] (EI²), Krachkovskiy [6], Mordtmann [5] (EI), OCLT (134-138).
A1. Majmū`a al-Hay'at al-Qadīma wa al-Jadīda - is mentioned in OALT.
Ph1. Emanations from the Magnet (Fuyūḍāt-i maghnaṭīsiyya) T. Edition : Mutafarriqa [1].

1329. MUHAMMAD SALIM IBN HUSAYN (MEHMED SELİM HOCA)

Muḥammad Sālim ibn Ḥusayn (17-18th c.), Turkish mathematician.
See: MAMS (II 641), OMLT (173-174).
M1. Super-commentary on Commentary on Treatise of Baha al-Dīn on Arithmetic (Ḥā-shiya `alā Sharḥ al-risāla al-Bahā'iyya fi'l-ḥisāb) = Commentary on Chapter on Measuring from "Essence of Arithmetic" (Sharḥ bāb al-misāḥa min Khulāṣat al-ḥisāb) - Istanbul (NO 2981 -under the first title). The second title is in OMLT. Super-commentary on commentary (No 1303, M1) by al-Iskandarī on the work (No 1058, M1) of al-`Āmilī.

1330. ANAND RAM MUKHLIS

Anand Rām Mukhlis, son of Raja Mardi Rām Khatri Lāhūrī, (d. 1751), Indian historian, poet and mathematician; pupil of Mirza Bedil, worked under Mogul Emperor Muḥammad Shah (1719-1748).
See: PL (I 612-614, II 398-399, III 344-345), STMI (390).

M1. Establishment of Operations of Siyaq (Dastur al-`amal-i siyāq) = Establishment of Operations of New Writing [Numbers] (Dastur al-`amal-i naw nawisandagī) P - Hyderabad (riyāḍa. 315), London (Sup. 6641/3; Ind. 2125).

1331. DAWUD AL-QARSI (AL-KARSİ)

Dāwūd ibn Muḥammad al-Qarṣī (d. 1755), from Kars (Turkey), Turkish mathematician and astronomer.
See: MAMS (III 17), OALT (440-441).

A1. Treatise on Commentary of Fath al-Dīn Treatise on Operations with the Sine [Quadrants] (Risāla sharḥ al-Fatḥiyya fi'l-a`māl al-jaybiyya) -Balıkesir (1069/1), Cairo (Talat majlis 366/1), Istanbul (SM Laleli 2761/2). Commentary on the work (No 873, A7) of Sibṭ al-Maridīnī.

A2. Sharḥ Risāla fī Rub` al-Muqanṭarat. - is mentioned in OALT.

1332. IBRAHIM AL-HAQQI ERZURUMI (İBRAHİM HAKKI AL-ERZURUMİ)

Ibrāhīm al-Ḥaqqī Erzurumī (1703-1780), from Erzurum (Turkey), Turkish theologian and astronomer.
See: MAMS (II 641), OALT (486-491), OM (I 33-36), SSM (175), Ihsanoğlu [5].

E1. Book of Knowledge (Ma`rifatt-nāma) P - Cairo (Ṭal`at ma`ārif turkī 28), Istanbul (Millet Feyzullah 272).

A1. The Sine Quadrant (Rub` al-mujayyab) T - Baku (B 1996/3).

A2. Astronomical Operations with the Sine Quadrant (A`māl falakiyya bi'l-rub` al-mujayyab) - is mentioned in OM.

A3. Calculations(Istikhrājāt) T - Tehran (Milli (555/6).

A4. Lunar Stations (Manāzil-i kamar) T - Tehran (Milli 555/7).

A5. Calculating Astronomical Operations (Istikhrāj-i a`māl-i falakiyya) - is mentioned in OM.

A6. Ikhtiyarāt-ı qamar. - Ankara (Milli Kütüphane FB. 555/8), Erzurum (Atatürk Üniveristesi SA 187/3).

A7. Gurranāma - Ankara (Milli Kütüphane FB. No. 355/9), Erzurum (Atatürk Üniversitesi SA. 287/4).

A8. Manẓuma dar ab`ād-i ithnā `ashara sayyāra. -Ankara (Milli Kütüphane FB. 555/5).

A9. Risāla-i asṭurlab - is mentioned in OALT.

A10. Salnāma -Ankara (Milli Kütüphane FB. No . 555/14), Erzurum (Atatürk Üniversitesi SA. 287/5).

A11. Istikhrājāt - Ankara (Milli Kütüphane FB. 555/6).

A12. Hay'at al-Islām, is mentioned in OALT.

1333. AHMAD AL-MUFTI FILIBE

Aḥmad al-Muftī Filiba (18th c.), Mufti of Filibe (now Plovdiv, Bulgaria), Turkish mathematician.
See: SSM (175)

M1. [Treatise on Algebra]. Alī al-Hamīdī (No 1336, M1) wrote a commentary on this work.

1334. SHAMS AL-DIN AL-BALAPURI

Shams al-Dīn Muḥammad Mirak ibn Muḥibballāh ibn `Ināyatallāh al-Ḥusaynī al-Balapurī (1715-1758), Indian mathematician and philosopher, born and worked in Balapur, Bidar.
See: STMI (360).

A1. On More Precise Determination of the Azimuth of Qibla (Fī taḥqīq samt al-Qibla) - Hyderabad (riyāḍa. 196). Treatise on determining the azimuth of Qibla by means of the astrolabe and sine quadrant.

A2. Indicator of the Sun (Miqyās al-shams) - Hyderabad (riyāḍa. 194). Treatise on use of the sine quadrant and astronomical observations for the city of Awrangabad.

1335. ISMA`IL FAHIM HAQQI (İSMAİL FEHİM)

Ismā`il Fahīm ibn Ibrāhīm Ḥaqqī (18-19th c.), Turkish astronomer, son of Ibrāhīm al-Ḥaqqī Erzurumī (No 1332).
See: OALT (627-628), SSM (175).

A1. Criterion of Times (Mi`yār al-awqāt) - Cairo (mīqāt turkī 2/1). Prayer tables for the latitude 38°30', dedicated to the author's father.

1336. MUHAMMAD AL-HAMIDI

Muḥammad ibn `Alī al-Hamīdī (d. 1765), Turkish astronomer.

See: GAL (II 472), GAL^2 (II 487), MAMS (II 642), OALT (449-453), SSM (107, 175).

M1. First Uses of Means of Brilliance of Pearls of Problems (Bawādir fawāid al-wasā'il fī nawādir farā'id al-masā'il) - Cairo (Ṭal`at majlis 635/12). Commentary on the work (No 1333, M1) of Ahmad, Mufti of Filibe.

A1. Brilliance of Mind in Commentary of "Joy of Minds" (Naḍra al-lubāb fī sharḥ Bahja al-albāb) - Alexandria (hisab 56/3), Ankara (Milli Kütüphane A. 2432/1), Beirut (Safa 31), Diyarbakır (184/1), Erzurum (Atatürk Üniversitesi İlahiyat Fakültesi 904/8), Eskişehir (948), Cairo (Ṭal`at mīqāt 84, 116, 202/1), Çankırı (238/4), Garrett (2797), Istanbul (SM Hamid. 863, 884, Laleli 2725/2, Raşid Efendi 1225/2, Yazma Bağışlar 1348/5, Pertevniyal 976, Ziya Bey 226/7, Bağdadlı Vehbi 2048/6, Atıf Efendi 1709/1, BU 4660/3, Ragıp Paşa 921), Konya (Bölge Yazma Eserler 581/6), Madina (Arif Hikmet majlis 128/1), Manisa (5387), Princeton (1005; Yehuda 2797). Description of the first Princeton manuscript: Hitti, Faris, and `Abd al-Malik [1] (317). Commentary on the work (No 1312, A2) of Söylemez-Zada.

A2. Treatise on (Instrument) Possessing a Throne (Risāla fī'l-āla al-musammāt dhāt al-kursī) = (Risāla fī dhāt al-kursī) = Treatise on the Throne (Risāla-yi kursī) - Bratislava (306), Cairo (133, falak 4312/1, mīqāt 133/2, 167/5, Fāḍil mīqāt 106/1, 167/5, 165, 165/2, Talat majlis 425/2, Kavala mīqāt 3/1, Ṭal`at majlis 524/2), Istanbul (SM Bağdadlı Vehbi 2170/1, Laleli 2725/1, 2761/1, Hamidiye 863/2, Fatih 5319/4, Serez 1913/1, 4453/2, Yazma Bağışlar 2606, 734/2, Hüseyin Çelebi 757, Esad Efendi 2014/3), Princeton (1006, 308, 815; Yehuda 1059, 3179, 3353, 4205, 4464, 4481), Rabat (449), St. Petersburg (B 3692/1). In addition to those stated above, 40 manuscript copies are mentioned in OALT. Description of the Princeton manuscript: Hitti, Faris, and `Abd al-Malik [1] (317). Treatise on the armillary sphere in 18 chapters.

A3. Risāla fi Davā'ir al-Shuhur wa Jadāwil anṣāf al-Aqṭār. - is mentioned in OALT.

1337. AHMAD AL-QAYRAWANI

Aḥmad ibn Muḥammad al-Qadīdī al-Qayrawānī (17-18th c.), from Qayrawan, Maghribi astronomer.

See: MAMS (II 642), OALT (518-519), SSM (144).

A1. Commentary on Concise Book of Al-Zīj (Sharḥ kitāb al-zīj al-mukhtaṣar) - St. Petersburg (B 4221).

A2. Commentary on Al-Zīj of Sanjaqdar (Sharḥ zīj Sanjaqdār) - Cairo (mīqāt 1046/1, 1121), Princeton (Yehuda 786), Tunis (Nat. 18104). Commentary on the al-Zīj of al-Sharīf Sanjaqdār al-Tūnisī (No 1169, A1).

1338. `UMAR AL-MAGHRIBI

`Umar ibn Muḥammad ibn Ibrāhīm ibn Wakīl al-Maghribī (17-18th c.), Ottoman astronomer; was born in Tunis, worked in Alexandria.

See: GAL^2 (II 204), MAA (202), MAMS (III 39-40), OALT (509-510), SSM (144).

A1. Treatise on the Construction of the Sine Quadrant (Risāla fī `amal rub` al-juyūb) = (Risālat al-mujayyab) - Alexandria (hisab 53), Cairo (Ṭal`at mīqāt 209, Taymūr riyāḍa. 160), Kazan (99), St. Petersburg (Nat. 129/1). Treatise in 45 chapters.

A2. Gift on Hearing Explanations on Positions of the Seven Planets, their Conjunctions, and what Depends on them (Tuḥfat al-sāmi` mubayyin aḥwāl al-kawākib al-sab`a wa iqtirānātihā wa mā ya`liqu minhā) - Kazan (100), St. Petersburg (Nat. 129/2).

1339. MUHAMMAD `ALI HAZIN JILANI

Muḥammad `Alī Jamāl al-Dīn Ḥazīn ibn `Abī Ṭālib Zāhidī ibn `Abdallāh Lāhījī Jīlānī (1692-1766), from Gilan, was born in Isfahan; historian and knowledgeable in many sciences; studied in Isfahan and Shiraz, worked from 1734 onwards in Lahore, Delhi, and Benares (all in India); died in Benares.

See: PL (I 840-849, 1336, II 33, 95-96, 448-449), PL^2 (918-926), MAMS (II 642-643), STMI (293); Browne [6] (115-118), H. Hidayat [2] (EI), H. Hidayat and Massé [1] (EI^2), Khatak [1].

A1. Treatise on Astronomy (Risāla dar hay'at) P - Calcutta (1778/2).

Me1. Treatise on Weights by Shari`at and Usual (Risāla-yi awzān-i shar`ī u `urfī) P - Calcutta (Curz. 502/7), Paris (483b), Patna (III 232).

Ph1. Treatise on All Being in the Air (Risāla-yi kā'ināt-i jaww) P - Calcutta (1778).

H1. History of Events (Ta'rīkh-i aḥwāl). Edition: Ḥazīn [2], English translations by Belfour: Hazin [1].

H2. [Autobiography] P - Edition by Belfour: Ḥazīn [2], English translation by Master: Hazin [3],

1340. `ABD AL-LATIF AL-DIMASHQI

Abu'l-Riḍā `Abd al-Laṭīf ibn Aḥmad ibn Muḥammad ibn `Alī al-Kutubī al-Shāfi`ī al-Dimashqī (d. 1749), from Damascus; Ottoman mathematician and astronomer, worked in Syria and Egypt.

See: GAL² (I 558, II 931), MAMS (II 643), OALT (427-429), OMLT (194-197), SSM (110-111).

M1. Selected from "A Little" (Nukhbat al-Tuffāḥa) - Cairo (falak riyāḍa. 310, 629, 646). The complete list is given in OMLT. Abridgement of the treatise (No 447, M1) of al-Ash`arī al-Yamanī.

M2. Commentary on Poem on Measurement Entitled "Selected from a Little" (Sharḥ Manẓūma fi'l-misāḥa al-musammāt bi Nukhbat al-tuffāḥa) = Commentary on "Selected from a Little" (Sharḥ Nukhbat al-Tuffāha fi `ilm al-misāḥa) - Istanbul (SM Laleli 2751a/1), Tripoli (Um. 1101/2). Commentary on M1, written in 1721. The complete list is given in OMLT.

M3. Poem on Numerical Solution (Urjūza fi ḥall al-a`dād) - Gotha (1490). The complete list is given in OMLT. Description of the manuscript: Pertsch [3] (115-116).

M4. Commentary on "Poem on Solution of Numbers" (Sharḥ Urjūza fi ḥall al-a`dād) - Cairo (mīqāt 589, riyāḍa. 340, Fāḍil riyāḍa. 10, 16). Commentary on M3. The complete list is given in OMLT.

A1. The Nearest Way for More Exact Position of the Scorpius (al-Minhāj al-aqrab li taṣḥīḥ mawḍi` al-`Aqrab) - Cairo (mīqāt 149, 1103-1104, Ṭal`at majlis 811/8, mīqāt 83/1, Taymūr riyāḍa. 67, 286), Istanbul (NO 2954). Treatise was written in 1737.

A2. Smell of Musk on the Meccan Problem (al-Nafḥa al-miskiyya fi'l-mas'ala al-Makkiyya) - Cairo (mīqāt 1146/1). Reply to the question of some scholars in Mecca about the time difference between the furthest East and the furthest West.

A3. Abridged Words on Geometric Construction (al-Alfāz al-mūjaza fi'l-waḍ`iyya bi'l-handasa) - Cairo (mīqāt 723/1, 1146/2 - incomplete). Treatise in 2 chapters on the sundial theory.

A4. Badhl al-Naṣīḥa fi'l-`Ilm bi al-Ṣaḥīfa. - is mentioned in OALT.

1341. YUSUF AL-KILARJI (AL-KİLARCİ)

Ḥājjī Jamāl al-Dīn Yūsuf ibn Yūsuf al-Ḥalabī al-Maḥallī al-Shāfi`ī al-Kilārjī al-Falakī (d. 1740), Ottoman astronomer, pupil of al-Razzaz (No 1243), timekeeper of the Selimiye mosque in Edirne (Turkey).

See: GAL (II 1025), MAMS (II 643), OALT (412-415), SSM (108).

A1. Pearl Treasury on Positions of Lunar Stations (Kanz al-durar fi aḥwāl manāzil al-qamar) - Algiers (1467/3), Cairo (mīqāt 484).

A2. Book of Explanation of Equinoctial Figures in Drawing Horary Lines on Plane Surfaces (Kitāb īḍā ḥ al-ashkāl al-i`tidāliyya fi rasm al-sā`āt wa'l-asṭiḥā al-mustawiyya) - Cairo (falak 26114, mīqāt 586/3 - a fragment, 677). Treatise in two books written in 1715.

A3. Collection of Pearls and Sapphires on Determining the Operations of Timekeeping (Multaqaṭ al-durar wa'l-yawāqīt fi istikhrāj a`māl al-mawāqīt) - Cairo (mīqāt 834). Treatise contains prayer tables for the latitude 35°30' of Crete.

A4. Jadāwil Faḍl Dā'ir al-Shams wa Zuḥal wa'l-Mushtarī wa'l-Marīkh wa al-Zuhra wa `Utārid wa Jadāwil Ukhrā fi'l-Ḥisāb. - Cairo (Fāḍil mīqāt 20/2).

A5. Kanz al-Futūḥ fi Rasm al-Sā`āt `alā al-Suṭūḥ. - Istanbul (Univ. AY. 6944).

A6. Kitāb fi'l-Ṭullāb wa Rasm al-Munḥarifāt wa'l-Basā'iṭ wa'l-Mazāwin wa'l-Asṭiḥa. - Istanbul (NO 2923/1).

A7. Muqaddima fi Ma`rifat taqwīm al-Kawākib al-Sayyāra bi'l-Raṣad al-Jadīd al-Samarkandī li Ṭūl "adna". - Talat mīqāt 95.

A8. Taqwīm li Sana 1145. Ambrosiana volume 83.

1342. `UMAR AL-MAI AL-CHILLI (AL-ÇULLİ)

`Umar ibn Aḥmad al-Mā'ī al-Chilli "al-Jillī" or "al-Chullī" (d. 1613), philosopher, author of commentary on the treatise of `Aḍūd al-Dīn al-Ijī (1281-1355) on dialectic, written in 1710; Ottoman mathematician and astronomer.

See: GAL² (II 596, III 735), MAMS (II 643), OALT (263-264), SSM (106).

M1. Commentary on "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) - Baku (B 2130/1, 2894), Berlin (5301), Cairo (falak 3851, riyāḍa. 698, Ḥalīm riyāḍa. 4, Kavala riyāḍa. 113, Ṭal'at riyāḍa. 120, Taymūr riyāḍa. 258/3), Istanbul (Atıf 1691; SM Aşir 225, Hamid. 878), Leipzig (883/8), Moscow (199), Munich (851), Princeton (Yehuda 370, 2300, 2600, 2683, 4199, 4383, 4619, 4626, 4777), Vienna (1157/1). Commentary on the work (No 1058, M1) of al-`Āmilī, written in 1678.

A1. Commentary on the "Sine Quadrant" (Sharḥ li rub` al-mujayyab) - Cairo (mīqāt 1082/1, Ṭal'at majlis 366/6), Kazan (837, 1405/1, 1607/4, 1703/2). Commentary on the work (No 1006, A5) of al-Ru`ayni.

1343. MUHAMMAD IBN ZAGHBIB

Abū `Abdallāh Muḥammad ibn Zaghbīb (17-18th c.), mathematician; also knew inheritance well.
See: MAMS (II 644).
M1. Ratio and Equality in Inheritance (al-Nisba wa'l-kafā'āt fī qism al-tarikāt) - Alexandria (funūn 142-143). Treatise was written in 1741.

1344. MAHMUD EFENDI

Abū'l-Islāḥ Ḥājjī Maḥmūd Efendī ibn Ḥasan al-Nīshī al-Ḥanafī (d. 1808), Ottoman astronomer, born in Nish, Serbia.
See: MAMS (II 644), OALT (558-559), OM (III 261).
OM mentions his works:
A1. Treatise on Drawing a Sphere (Risāla fī rasm al-kura).
A2. Rule for Determining Solar Eclipses (Qā`ida fī istikhrāj al-kusūf) T.
A3. Rule for Determining Lunar Eclipses (Qā`ida fī istikhrāj al-khusūf) T.
A4. Rule for the Construction of Parallaxis Table (Qā`ida fī waḍ` jadwal ikhtilāf al-manẓar) T.
A5. Movements of Fixed Stars (Ḥarakāt al-kawākib al-thābita) T.
A6. Taqwīm-i Khawaṣṣ . -is mentioned in OALT.
A7. al-Maḥmūdiyya fi al-`Amal bi Rub` al-Dustūriyya. - is mentioned in OALT.

1345. SA`IDI IBN KHALIL

Sa`īdī ibn Khalīl (17-18th c.), Ottoman mathematician, worked in Istanbul at the library of Damad Ibrāhīm Pasha under Ottoman Sultan Ahmad III (1703-1730).
See: MAMS (II 644), OM (III 272).
M1. Key for Difficulties (Miftāḥ al-mushkilāt) - is mentioned in OM.

1346. AHMAD AL-DAYRABI AL-GHUNAYMI

Aḥmad ibn `Umar al-Dayrabī al-Shāfi`ī al-Ghunaymī (18th c.), Egyptian mathematician.
See: GAL (II 421), GAL² (I 677, II 445), OMLT (185), SSM (111).
M1. Victory of the Generous King on the Simplification of Division of Inheritance among some Slaves [of Allah] (Fatḥ al-malik al-jawād bi tashīl qismat al-tarikāt `alā ba`ḍ al-`ibād) - Alexandria, Cairo (Taymur riyāḍa. 291, Zaki 778/4).

1347. RAGHIB PASHA WAZIR (RAGIB PAŞA)

Raghib Pasha Wazir, Ottoman vizier and encyclopaedist (d. 1763).
See: MAMS (III 37)
E1. Ship (Safīnat al-Rāghib). Encyclopaedia containing section on astronomy. Section on astronomy of E1 - Baku (B 407/32). Printed in Bulaq 1839.

1348. MUSTAFA SIDQI

Muṣṭafā Ṣidqī ibn Ṣāliḥ (d. 1769), Ottoman mathematician and astronomer, worked in Egypt.
See: OALT (466-467), OMLT (214-217), SSM (112).
M1. Kitāb `Amal al-Dā'irat al-Maqsūma bi Sab`at Aqsam Mutasawiya. The complete list is given in OMLT.

M2. Risāla fi `Ilm al-Jabr wa'l-Muqabala- The complete list is given in OMLT.
M3. Risāla fi'l-misāḥa - The complete list is given in OMLT.
M4. Taḥrīr istikhrāj al-awtār li'l-Bīrūnī- The complete list is given in OMLT.
A1. Description of Some Astronomical Instruments (Rusūm li ba`ḍ al-ālāt al-falakiyya) - Cairo (Fāḍil riyāḍa. 40/2). Photo-reproduction of a page: SSM (287).
A2. Heyete Dair bir Risale. - is mentioned in OALT.
A3. Davā'ir-i Ijtimā` wa Istikbalin Resm ve Istimali. - is mentioned in OALT.

1349. IBRAHIM AL-HALABI RAGHIB PASHA KHWAJASI (RAGIB PAŞA HOCASI)

Ibrāhim ibn Muṣṭafā ibn İbrāhīm al-Ḥalabi, known as "Raghib Pasha Khwājasi" (d. 1776), from Aleppo; Ottoman astronomer, pupil of al-Jabartī (No 1367); worked at the Aya Sofia Mosque in Istanbul.
See: GAL (II 311), GAL[2] (II 428), OALT(474), SSM (86, 174).
M1. Comments on "Subtleties of Truths" (Hawāshī `ala Raqā'iq al-ḥaqā'iq) - Cairo (mīqāt 877). Commentaries on the work (No 873, M1) of Sibṭ al-Maridīnī.
M2. Commentary on "Comprehensive Arithmetic" of Ibn al-Hā'im (Sharḥ al-Ḥāwī fi'l-Ḥisāb li Ibn al-Hā'im)- Cairo (riyāḍa. 667). Commentary on the work (No 783, M22) of Ibn al-Hā'im.
A1. Treatise on Controversible Question at the Beginning of Commentary by Qāḍī-Zāda on "Compendium" of al-Jaghmīnī)- Cairo (Fāḍil hay'a 4/2), Istanbul (SM Laleli 2126/3). Treatise on the problem of the height of mountains as discussed in the commentary (No 808, A1) by al-Rūmī on the work (No 547, A1) of al-Jaghmīnī.
Me1. [Treatise on Weights and Measures] – Princeton (Yehuda 1062).

1350. HUSAYN HUSNI (HÜSEYN HUSNİ)

Ḥusayn Husnī Efendī Mu'min-Zāda (18th c.), Ottoman mathematician and astronomer called "al-Munajjim al-thānī" (Second Astronomer), worked under Ottoman Sultan Maḥmūd I (1730-1754), translated the star catalogue of J. Lalande (1732-1807) from French into Arabic and Turkish (he called this catalogue "Al-Zīj of Lalande").
See: MAMS (II 644), OALT (581-584), OM (III 260), SSM (176-177), TIFI (284-285).
M1. Mirror of Hearts (Mir'āt al-qulūb) T - Cairo (Taymūr majlis 358/10).
A1. Tables for Timekeeping (Jadāwil mīqātiyya) - Cairo (falak 4002). Tables for the latitude 21°45' of Mecca.
A2. Küçük İlm-i Heyet. - (1325 Kastamonu) Özege, II, 491.
A3. Terceme-i Zīc-i Lalande. - Istanbul (Univ. TY. 6553; Kandilli 456/1, 492, 231, 360, 505, 193. 409, Cerrah Paşa Tıp Tarihi 556, Belediye Muallim Cevdet 151). In addition to those stated above, 17 manuscript copies are mentioned in OALT.
A4. Taqwīm Sāl 1230-1231. -Istanbul (Kandilli 24).

1351. `UTHMAN AL-MUHTADI (OSMAN B. ABDULMANNAN)

`Uthmān al-Muhtadī ibn `Abd al-Mannān, interpreter of the Ottoman Governor in Belgrade; made interpretations from French into Arabic and Turkish; mathematician and mechanician, worked in Serbia.
See: MAMS (III 40), OMLT (243-246), Ihsanoğlu [5], Şeşen [3].
MMe1. Gift of al-Muhtadi on the Science of Geometry and Surveying, Throwing the Projectiles, and Burying Powder Charges (Hadiyyat al-Muhtadī fi `ilm al-handasa wa'l-misāḥa wa ramy al-khamīra wa ḥafr al-lughm) - Princeton (Garr. 1056). The complete list is given in OMLT. Description of the manuscript: Hitti, Faris, and `Abd al-Malik [1] (331).

1352. MUHAMMAD MIKHALIJI

Muḥammad ibn Husraw ibn Khiḍr Mīkhālījī (Mīkhālīch) Qurraja Beg (first half of 18th c.), Ottoman astronomer of Serbian origin; worked at the great mosque of Manisa; translated the work (No 308, A5) of Kushyar ibn Labban into Turkish (Konya 745).
See: MAMS (II 645), OALT (397-398), OM (III 303).

A1. Knowledge of the Construction of the Astrolabe (Ma`rifat a`māl asturlāb) T - Istanbul (SM Beşir 665/7, Hüsrev 236/5).

A2. [Supplement to the work of Kushyar ibn Labban as translated by Mīkhālījī] - is mentioned in OM. Treatise was written in 1729.

1353. YUSUF AL-JURDI AL-AZHARI

Yūsuf ibn Aḥmad al-Jurdī al-Wanā al-Shāfi`ī al-Azharī (18th c.), Egyptian astronomer.

See: OALT (432), SSM (112).

A1. Information on Indications of the Knowledge on Lunar Eclipses and Crescents (Kushūfāt al-adilla fī ma`rifat al-khusūfāt wa'l-ahilla) - Cairo (mīqāt 641). Treatise in 5 books written in 1749.

1354. MUHAMMAD MUNAJJIMAK (MEHMED MÜNECCİMEK)

Abū `Abdallāh Shakibī Muḥammad ibn Aḥmad ibn Aḥmad ibn Muḥammad ibn Ḥasan ibn Ḥusayn Munajjimak (d. 1667); (munajjimak = little astronomer).

See: OALT (304-305), SSM (173-174).

A1 [Treatise on Astronomical Instruments] - Berlin (5870 - Book III, anonymous), Cairo (mīqāt 85, 639/30, 962 - fragments of Book III on sundials, mīqāt 70/1, 735 - fragments of Book V on astrolabes).

A2. Majmū`a-i aḥkām Tālī` Sāl 1072. - Istanbul (Kandilli 165/4).

A3. Taqwīm-i Nujūm li Sana 1075. - Istanbul (Kandilli 109).

A4. 1076 Hicret Yılı Takvimi. - Istanbul (Kandilli 165/1).

1355. HUSAYN AL-MAHALLI

Ḥusayn ibn Muḥammad al-Maḥallī (d. 1756), Egyptian mathematician.

See: GAL² (II 483), MAMS (II 645), OMLT (204-207), SSM (112).

M1. Removal of the Cover from "Delight [of Observers in the Art of] Ghubār" (Kashf al-astār `an Nuzhat al-ghubār) - Cairo (Fāḍil riyāḍa . 24), Princeton (Yehuda 1082). The complete list is given in OMLT. Commentary on the work (No 783, M6) of Ibn al-Hā'im written in 1750.

M2. Victory of Lord of Creations over Text [of the Work] of al-Sakhāwī (Fatḥ rabb al-bariyya `alā matn al-Sakhāwiyya) - Cairo (falak 3945/1, 6703, riyāḍa. 95, 348-349, 616, 655, Taymūr riyāḍa. 6, 214), Princeton (Yehuda 1060/1). The complete list is given in OMLT. Commentary on the work (No 1026, M1) of al-Sakhāwī, written in 1726.

M3. Tables for Finding Composite Numbers (Jadāwil al-ghurbal fī bayān al-a`dād al-murakkaba) - Cairo (riyāḍa. 316). Tables of composite numbers compiled by "Eratosthenes sieve".

1356. AHMAD HAMZA AL-JAWHARI

Aḥmad ibn Ḥasan ibn `Abd al-Karīm Ḥamza al-Jawharī (d. 1768), Egyptian mufti and arithmetician.

See: GAL (II 435), GAL² (II 459-460), SSM (187).

M1. Treatise on Sieve (Risāla al-ghurbal) - Cairo (Taymūr riyāḍa. 320). Treatise on composite numbers.

1357. `ABD AL-`AZIZ AL-WAZZANI

Abū Muḥammad `Abd al-`Azīz ibn `Abd al-Salām ibn Aḥmad al-Wazkānī al-Wazzānī (18th c.), astronomer.

See: SSM (144).

A1. Exposition of Timekeeping (Taḥrīr al-mawāqīt).

1358. MUHAMMAD AL-RASMUKI

Muḥammad ibn `Abd al-`Azīz al-Jazūlī al-Ya`qūbī al-Rasmūkī (18th c.), Maghribī astronomer.

See: OALT (410-411), SSM (144).

A1. Commentary on "Sufficient" (Sharḥ al-Muqni` fī `Ilm Abī Muqrī')- Cairo (falak 4324). Commentary on the work (No 1166, A1) of al-Marghīthī written in 1730.

1359. SAHNUN AL-WANSHARISI

Saḥnūn ibn `Uthmān ibn Sulaymān al-Wansharīsī (18th c.), Maghribī astronomer.
See: SSM (144).
A1. Guidebook for Commentary on the "Lamp" (Mufīd al-muḥtāj fī sharḥ al-Sirāj) - Cairo (falak 3853). Edition: al-Wansharīsī [1]. Commentary on the work (No 982, A1) of al-Akhḍarī.

1360. `ABD AL-SALAM AL-`ILMI

`Abd al-Salām ibn Muḥammad ibn Aḥmad ibn Ḥusnī al-`Ilmī (18th c.), Maghribī astronomer.
See: SSM (144).
A1. New Sapphires on "Exposition of Timekeeping" (Abda` al-yawāqīt `alā Taḥrīr al-mawāqīt) - Cairo (Taymūr riyāḍa. 132). Commentary on the work (No 1357, A1) of al-Wazzānī.
A2. Guide for Determining the Hour by the Quadrant of Ray and Shadow (Irshād al-khill li taḥqīq al-sā`a bi rub` al-shu`ā ` wa'l-ẓill) - Cairo (mīqāt 207). Treatise in 4 chapters.

1361. MUHAMMAD BANNANI

Abū `Abdallāh Muḥammad ibn `Abd al-Salām ibn Ḥamdūn al-Bannānī al-Fāsī al-Mālikī (d. 1750), Ottoman astronomer, born in Fas.
See: MAMS (II 645), OALT (433-434), SSM (144).
A1. Commentary on Poem of Abū Zayd al-Fāsī on Astrolabe - from the "Book of Hypothesis" (Sharḥ `ala naẓm Abi Zayd al-Fāsī fī'l-asṭurlāb - min Kitāb al-uqnūm) - Alexandria (hisab 50), Cairo (Taymūr riyāḍa. 113), Rabat (2531-2532). Commentary on the poem (No 1207, A2) of al-Fāsī which is a part of his book (E1). The complete title is given in OALT.

1362. MUHAMMAD AL-WARZAZI

Abū `Abdallāh Muḥammad ibn Muḥammad ibn `Abdallāh ibn al-Ḥusayn al-Warzāzī (d. ca 1760), astronomer.
See: MAMS (II 645).
A1. Introduction to the Problems of "Sufficient" (al-Maṭla` `alā masā'il al-Muqni`) - Rabat (2492-2494). Commentary on the work (No 1166, A1) of al-Marghīthī.

1363. MUHAMMAD RASHID AL-DIN

Muḥammad Rashīd al-Dīn (18th c.), Indian astronomer.
See: STMI (328).
A1. Commentary on "Explanation of Celestial Spheres" (Sharḥ Tashrīḥ al-aflāk) - Patna (2459). Commentary on the work (No 1058, A1) of al-`Āmilī.

1364. MAHAD AL-CHUKHI

Mahād ibn Ayyūb al-Chukhī (Chokhsky) (d. 1770), born in Chukh in Daghistan, astronomer, mathematician, and philosopher, studied in Cairo.
See: MAMS (II 645-646); Alqadari [1] (148), Kaymarazov [1] (33), Saidov [1] (121).
A1. [Commentary on "Operations with the Sine Quadrant] - Mahachqala (187/2, on margins). Commentary on the treatise (No 1281, A1) of Damadan al-Muḥī.

1365. MUSTAFA AL-TAI

Muṣṭafā ibn Muḥammad al-Ṭā'ī al-Ḥanafī (18th c.), Egyptian mathematician.
See: GAL² (II 267), OMLT (230), SSM (112).
M1. Pearl of al-Ṭā'ī on Principles of Arithmetic (al-Durra al-Ṭā'iyya fī uṣūl al-arithmātīqiyya) - Cairo (falak 9659/3), Princeton (Garr. 1053).

1366. MUHAMMAD AL-MANFALUTI AL-SHADHILI

Muḥammad Abū Shahya al-Manfalūṭī al-Shāfi'ī al-Shādhilī al-Azharī (18th c.), Egyptian mathematician.
See: OMLT (197-198), SSM (112).

M1. Brilliant Pearl for Resolution of Words of al-Sakhāwī (al-Durra al-bahā'iyya fī ḥall alfāẓ al-Sakhāwiyya) - Cairo (riyāḍa. 12). Commentary on the work (No 1026, M1) of al-Sakhāwī, written in 1750.

M2. Majestic Pearl on the "Victory of Lord Creator" (al-Durra al-saniyya 'alā Fatḥ rabb al-bariyya) - Cairo (riyāḍa. 350). Super-commentary on commentary (No 1355, M1) by al-Maḥallī on the work (No 1026, M1) of al-Sakhāwī.

1367. HASAN AL-JABARTI

Ḥasan ibn Ibrahim ibn Ḥasan al-Zaila'ī al-Jabartī (1698-1774), Egyptian astronomer, came from Gabart, Ethiopia.
See: GAL (II 472), GAL2 (II 487), MAMS (II 646), OALT (472-479), SSM (113-114), STMI (420); al-Jabarti [1] (I 386-408).

M1. Removal of Difficulties by Surfaces of Ten by Ten in the Greater Part of Figures (Raf' al-ishkāl bi ẓuhūr al-'ashara fī'l-'ashara fī ghālib al-ashkāl) - Beirut (244), Cairo (falak 10970, I 435, III 60), Hyderabad (riyāḍa. 40), Princeton (Yehuda 3064, 4324).

A1. Rough Draft on More Exact Instrument (al-'Ujāla 'alā a'dal āla) - Cairo (Taymūr riyāḍa. 256, Zaki 402), Princeton (1007). Description of the Princeton manuscript: Hitti, Faris, and 'Abd al-Malik [1] (317-318).

A2. Treatise on Equatorial Circle (Risāla fī dā'irat al-mu'addil) - Alexandria (ḥisāb 49).

A3. Chapter on Reckoning Azimuths on [Sundials] Inclined by 53 [Degrees] South on the Latitude 30 [Degrees] (Bāb fī ḥisāb sumūt munḥarifāt 53 janūb bi 'arḍ 30) - Cairo (falak 4007/4, Fāḍil mīqāt 178/2).

A4. Eloquent Treatise on what is Related to Surfaces [of Sundials] (al-Risāla al-mufaṣṣaḥa fī mā yata'allaqu bi'l-asṭiḥa) - Cairo (hay'a 97 - incomplete, Taymūr riyāḍa. 343/1). Treatise in 3 chapters.

A5. [Tables for Drawing Horizontal Sundials] - Cairo (mīqāt 721).

A6. [Tables for Drawing Vertical Sundials] - Cairo (mīqāt 612). Tables were compiled jointly with al-Shuraybī (No 1370).

A7. Fruits Collected from Chapters of "Fath al-Dīn [Treatise]" (al-Thamarāt al-majniyya min abwāb al-Fatḥiyya) - Cairo (majlis 11/4, mīqāt 362). Commentary on the treatise (No 873, A7) of Sibṭ al-Maridīnī on operations with the sine quadrant.

A8. Fragrant Breath on "Treatise of Fath al-Dīn" (al-Nasamāt al-fayḥiyya 'ala'l-Risāla al-Fatḥiyya) - Cairo (mīqāt 259, Fāḍil mīqāt 232). Commentary on the same treatise (No 873, A7) of Sibṭ al-Maridīnī.

A9. Reaching a Hope in Means of Opposition (Bulūgh al-amal fī kayfiyyat al-istiqbāl) - Cairo (Taymūr riyāḍa 155). Treatise on determining azimuth of Qibla.

A10. [Survey of Tables of Ephemerides of the Sun of al-Khwanaki] - Cairo (Taymūr riyāḍa. 300/1). Survey of the treatise (No 1323, A3) of al-Khwānakī.

A11. [Astronomical Tables and Tables for Prayer times for Cairo] - Cairo (mīqāt 189).

A12. The Most Concise from Concises on Almucantar Quadrants (Akhṣar al-mukhtaṣarāt 'alā rub' al-muqanṭarāt) - Cairo (mīqāt 462).

A13. Treatise on Determining the Distance of the Sun by Oblique Plane and Determining the Azimuth of Qibla (Risāla fī ma'rifat bu'd al-shams 'alā saṭḥ al-munḥarif wa ma'rifat jihat al-Qibla) - Tehran (Senat 7572/11).

A14. Table of Expected Position of Scorpius of Hour in Coptic Months (Jadwal al-tawqī'āt wa mawqī' 'aqrab al-sā'a fī'l-shuhūr al-qibṭiyya) - Cairo (Taymūr riyāḍa. 346).

A15. Truths of Subtleties on "Subtleties of Truths" (Ḥaqā'iq al-raqā'iq 'alā Raqā'iq al-haqā'iq) - Cairo (mīqāt 186/3, Fāḍil mīqāt 78, Zaki 784/2), Leiden (2809). Commentary on the work (No 873, M1) of Sibṭ al-Maridīnī.

Me1. Precious Necklace Relating to Balances (al-'Iqd al-thamīn fī mā yata'allaqu bi'l-mawāzīn) - Beirut (222), Cairo (falak 4527, Taymur riyāḍa. 121, 339, 344, Zaki 421), London (2824), Paris (2476, Sup. 985). Edition with French translation and research: Sauvaire [2].

1368. MUHAMMAD AL-AHSAI

Muḥammad ibn `Abd al-Raḥmān ibn Ḥusayn ibn Muḥammad ibn `Afāliq al-Aḥsā'ī al-Ḥanbalī (d. 1750). Ottoman theologian and astronomer.

See: GAL (II 494), GAL² (II 507), MAMS (II 647), OALT (436-437).

A1. Stairs of Ascent to the Science on [Lunar] Stations and Zodiacal Signs (Sullam al-`urūj ilā `ilm al-manāzil wa'l-burūj) - Istanbul (Kandilli 167), Tarim (Ibn Sahl 296/2).

A2. al-Jadwal - Baghdad (Awqaf 12141/399/2)

A3. Madd al-shabak li Ṣaydi `ilm al-falak; is mentioned in OALT.

1369. `ABDALLAH AL-MAWSILI

Sayyid Abū Muḥammad `Abdallāh ibn Fakhr al-Dīn al-Ḥusaynī al-Mawṣilī al-Ḥanafī "Fakhrī-Zāda" (d. 1775), from Mosul; Ottoman astronomer.

See: MAMS (II 647), OALT (479-482), SSM (162), TIFI (261-262).

A1. Fresh Thoughts on Commentary on "Tympanum" (al-Sawāniḥ al-karīḥa fī sharḥ al-Ṣafīḥa) - Cairo (huruf 56/3), Princeton (Yehuda 4616/1). Commentary on the work (No 1058, A6) of al-`Āmilī, written in 1736.

A2. Taṣrīḥ al-idrāk fī sharḥ tashrīḥ al-aflāk. - is mentioned in OALT.

1370. MUHAMMAD CHELEBI AL-SHURAYBI

Muḥammad Chalabī al-Shuraybī (18th c.); astronomer, co-author of tables with al-Jabartī (No 1367, A6).

See: SSM (114).

A1. [Tables for Drawing Sundials] - Cairo (Fāḍil mīqāt 64, 70). Tables for drawing sundials for the latitudes 30° of Cairo and 24° of Medina.

1371. MUHAMMAD AL-NAFRAWI

Muḥammad al-Nafrawi (18th c.), Egyptian astronomer, pupil of al-Jabartī (No 1367).

See: SSM (114).

A1. [Tables for Drawing Sundials] - Cairo (mīqāt 466). Tables for drawing horizontal sundials for the latitude 30° of Cairo.

1372. AMIN AL-DIN AL-SIDDIQI AL-LAHURI

Amīn al-Dīn Aḥmad ibn Sayf al-Dīn Muḥammad al-Ṣiddiqī al-Lahūrī (d. 1780), from Lahore, mathematician.

M1. Brilliance of Hearts in Commentary of "Essence of Arithmetic" (Lawāmi` al-lubāb fī sharḥ Khulāṣat al-ḥisāb) - Hyderabad (Osm. 510/Sh, Sa`id. riyāḍa. 25). Commentary on the work (No 1058, M1) of al-`Āmilī.

1373. IBRAHIM AL-ZAMZAMI AL-KHALWATI

Ibrāhīm ibn Muḥammad ibn `Abd al-Salām al-Makkī al-Zamzamī al-Khalwatī (1698-1781), Ottoman astronomer.

See: GAL (II 516), GAL² (II 538), MAMS (II 647), OALT (491-493).

A1. Poem on Times (Manẓūma fī'l-awqāt) = Poem on the Construction of the Sine Quadrant (Manẓūma fī'l-`amal al-rub` al-mujayyab) - Cairo (mīqāt 154/1). Princeton (Garr. 150/1, 2077/1).

A2. Means of Understanding the Almucantar Instrument (Wasīlat al-thiqāt bi fahm ālat al-muqanṭarāt) - Cairo (mīqāt 154/2).

1374. MUHAMMAD IBN KAMMAD

Muḥammad ibn Aḥmad ibn Kammād, Ra'īs al-Munajjimīn bi'l-Bāb al-Sāmī (chief astronomer of the Ottoman Empire); timekeeper of Sultan Mehmed II (Fatih) mosque in Istanbul; (18th c.).

See: MAMS (II 647).

A1. [Astronomical Treatise] - Cairo (mīqāt 70), Tunis (Aḥmad. 5559). Treatise contains description of astrolabes, including the astrolabes "zarqāla" and "shakāziya".

1375. MAHDI-MUHAMMAD AL-THUGHRATI

Mahdī-Muḥammad al-Thughrātī (Sogratlinskiy) (18th c.), from Sughratl in Daghistan; astronomer, pupil of al-Chukhī (No 1364).

See: MAMS (II 648); Alqadari [1] (235), [2] (149), Saidov [1] (120).

A1. [Commentary on the "First Basis of Generosity in the Science on the Determination of Time and Qibla in Daghistan"] - Mahachqala (185/3, on margins). Commentary on the work (No 1243, A15) of al-Razzāz.

1376. SHAYTAN `ABDALLAH AL-THUGHRATI

Shayṭan `Abdallāh al-Thughrātī (Sogratlinsiy) (18th c.), from Sughratl in Daghistan, astronomer. He was called "Shaytan" (devil) because of his successful predictions of the eclipses.

See: MAMS (II 648); Alqadari [1] (235), [2] (149), Saidov (120).

1377. AHMAD AL-SUJA`I

Shams al-Dīn Abū'l-Faḍā'il Aḥmad ibn Shihāb al-Dīn Aḥmad ibn Muḥammad al-Suja`ī al-Shāfi`ī al-Azharī (d. 1782), Egyptian astronomer.

See: GAL (II 422-423), GAL^2 (II 445-446), MAMS (II 648), OALT (494-495), SSM (112-113).

M1. Victory of Possessing Magnific Descriptions by Commentary on Text of Ibn al-Yāsamin (Fatḥ dhī 'l-ṣifāt al-saniyya bi sharḥ matn al-Yasamīniyya) - Cairo (riyāḍa. 181/10).

M2. [Poem on Fractions] - Cairo (Zaki 778/3).

A1. Victory of the All-knowing and Almighty in Commentary on "Selection of Jewels" for the Knowledge of Lines and Circles (Fatḥ al-`ālim al-qādir bi sharḥ Luqṭat al-jawāhir li ma`rifat al-khuṭuṭ wa'l-dawā'ir) - Cairo (falak 9659/4, majlis 219/1, mīqāt 645, 805), Princeton (Garrett 1008). Description of the Princeton manuscript: Hitti, Faris, and `Abd al-Malik [1] (318). Commentary on the work (No 873, A3) of Sibṭ al-Maridīnī.

A2. First Guide for Mind and Eyes on the Knowledge of Parts of Night and Day (Hidāya ūlā al-baṣā'ir wa'l-abṣār ilā ma`rifat ajzā' al-layl wa'l-nahār) - Cairo (falak 4596, majlis 289/1, mīqāt 181/5, 960, Fāḍil mīqāt 174/2, 242, Ṭal`at mīqāt 126).

A3. Poem on Lunar Stations (Manẓuma fī manāzil al-qamar).

A4. Commentary on Poem on Lunar Stations (Sharḥ Manẓūma fī manāzil al-qamar - Cairo (Ṭal`at mīqāt 213).

1378. MAWLANA `ALI QURI- ZADA (KURU-ZADE ALİ)

Mawlana `Alī Quri-Zāda (d. 1785). Ottoman astronomer.

See: STMI (333), OALT (522)

A1. Commentary on "Gift on Astronomy" (Sharḥ Tuḥfa fi'l-hay'a) – Cairo (Hey'e 7) Hyderabad (riyāḍa. 48). Commentary on the work (No 668, A3) of al-Shirāzī.

1379. `ALI AL-BAYSUSI

`Alī ibn Sa`d al-Baysūsī (18th c.), Ottoman astronomer, pupil of al-Suja`ī (No 1377).

See: OALT (467), SSM (113).

A1 Clean Breath on Operations with the Side of Sine [Quadrant] (al-Naffaḥa al-zakiyya fi'l-`amal bi'l-jiha al-jaybiyya) - Cairo (Fāḍil mīqat 237).

1380. MUHAMMAD AL-MUKHALLALATI

Muḥammad ibn `Abd al-Raḥīm al-Mukhallalātī (18th c.), Syrian astronomer.

See: OALT (544-545), SSM (113).

A1. Delight of the Observer on the Abridgement of Al-Zīj of Ibn al-Shāṭir (Nuzhat al-nāẓir fī Ikhtiṣār Zīj Ibn al-Shāṭir) - Cairo (Fāḍil majlis 7/2, Ṭal`at majlis 515/4). Abridgement of al-Zīj of Ibn al-Shāṭir (No 750).

A2. Fatḥ al-Raḥmān fī İkhtiṣār Zīj-i Sultan. - is mentioned in OALT.

A3. al-Nashr al`Atır fī Ḥall Zīj İbn al-Shāṭır. - is mentioned in OALT.

A4. Tawḍīḥ al-Ahilla fī ma`rifat Taqwīm al-Kusuf wa al-Ahilla. - is mentioned in OALT.

1381. `ABD AL-RAHMAN AL-JABARTI

`Abd al-Raḥmān ibn Ḥasan al-Jabartī (d. 1774), Egyptian historian, son of Ḥasan al-Jabartī (No 1367), astronomer.

See: GAL (II 632), GAL² (II 730-731), OALT (564-565), SSM (114); Ayalon [1] (EI²).

A1. [Solar Altitude Tables] - Cairo (Ṭal`at riyāḍa. 300/2).

A2. Rules of Ephemerides of Seven Planets, Nodes, the Crescent, and Three Eras for the Year 1209 (Dastur taqwīm al-kawākib al-sab`a wa'l-jawzahar wa'l-ahilla wa'l-tawārīkh al-thalātha li sanat 1209) - Cairo (Fāḍil mīqāt 86).

H1. Mervellous Traces in Biographies and Informations (`Ajā`ib al-āthār fi'l-tarājim wa'l-akhbār). Edition: al-Jabarti [1]. Russian translation: al-Jabarti [2].

1382. MUHAMMAD AL-SABBAN

Muḥammad ibn `Alī al-Ṣabbān (18ᵗʰ c.), Egyptian astronomer, came from a family of soap-makers (ṣabbān = soap-maker).

See: GAL (II 171-172), GAL² (II 399-400), MAMS (III 27), OALT (543), SSM (114).

A1. Book on the Science of Astronomy (Kitāb fī fann al-hay'a) - Cairo (hay'a 6). Treatise in 3 books on theoretical astronomy based on treatises of al-Jaghmīnī, al-Rūmī and al-Qushjī.

1383. DARWISH `ABBAS WASIM (ABBAS VESİM EFENDİ)

Darwīsh `Abbās Wasīm (18ᵗʰ c.), Ottoman astronomer.

See: OALT (444-447), SSM (175).

A1. Method of [Obtaining] Maturity in Al-Zīj of Ulugh [Beg] (Nahj al-bulūgh fī Zīj Ulugh) T - Cairo (Tal'at falak turkī 42), Edirne (Selimiye 982), Istanbul (SM Hamidiye 858, Reşid Efendi Ek16788; BU 4646; Kandilli 247/1, 258, 240), Izmirli (Milli dolap 21 sıra 672 depo 17089, dolap 50 sıra 726 depo 26755), Konya (Yusuf Ağa 9887/15), Tavşanlı (Zeytinoğlu 291). Commentary on the Al-Zīj (No 816, A1) of Ulugh Beg. The commentary was written in 1745 for Ragıb Mehmed Pasha, the vizier of Sultan Mustafa III (1757-1774).

A2. Risāla fī Ru'yat al-Hilāl. - is mentioned in OALT.

A3. Tarjamat al-Burjandī min al-Khusūf wa al-Kusūf - is mentioned in OALT.

1384. SALIH EFENDI AL-MI`MARI

Ṣāliḥ Efendī al-Mi`marī (18ᵗʰ c.), Ottoman astronomer.

See: OALT (453-458), SSM (175).

A1. Great Table (al-Jadwal al-kabīr) - Cairo (falak 18199, Ṭal`at mīqāt 151, 215). Tables for timekeeping and prayer tables for the latitude 41° of Istanbul.

A2. Jadāwil fī al-Hay'a. - Baghdad (Awqaf 12230), Bankipor 2647, Istanbul (Kandilli Rasathanesi; Arkeoloji Müzesi 539, SM Aşir 224).

A3. Jadāwil al-irtifā'. - Bursa (Orhan Gazi 951), Istanbul (SM Veliyuddin 2267, Lala İsmail 287, Mihrişah Sultan 338, Nafiz Paşa 1225; Millet, Ali Emiri Arabi 2769, riyāḍa 202; Univ. TY. 1963; Kandilli 440/1, 430, 185).

A4. Jadāwil al-Muqanṭara. -Istanbul (SM Veliyuddin 3222/8).

A5. Jadāwil al-Taqwīm. - Istanbul (Technic Univ. BTTAM 15).

A6. Jadwal al-Mayl al-awwal wa Bu`d al-Quṭr wa Aṣl al-Muṭlaq, Jadwal Nıṣf al-Ta'dīl Ghāyat al-İrtifā' li 'Arḍ - Erzurum (Atatürk Üniversitesi SÖ. 18935/2).

A7. Taqwīmu Salih Efendi. -Istanbul (Üsküdar Selim Ağa `Azīz Maḥmūd Hüdayi 1775).

A8. Jadwal al-munḥarifa wa'l-basīṭa. -Istanbul (Kandilli Rasathanesi 355).

A9. Ikhtiṣār jadval-i Salih Efendi. -Istanbul (Kandilli 220).

A10. Jarīdat al-ruqūm al-falakiyya fī ḥisāb al-rusūm al-baladiyya. - Ankara (Milli Kütüphane A. 4113/1), Cairo (Ezheriyye 323, Ḥalīm 34479), Istanbul (Topkapı Hazine 454/5; Kandilli 21), Giresun (152/1), Madina (Arif Hikmet 2947).

A11. Fā'ida fī tatbīq al-rub` bi al-sā`a al-mu`tadila. - Istanbul (Köprülü III. Kısım 709/4).

A12. Qā'ida fī imtiḥān al-sā`a al-musta`mala fī aydī al-nās. - Istanbul (Köprülü III. Kısım 709/4).

A13. Qā'ida li al-sā`a al-muwāfiqa. - Istanbul (Köprülü III. Kısım 709/3).

A14. Imsākiye. - Manisa (1466).

1385. MUHAMMAD SADIQ JIHANGIRI (CİHANGİRLİ MUHAMMED SADIK EFENDİ)

Muḥammad Ṣādiq Jihāngīrī (d. 1812). chief astronomer (munajjim bāshī) in the Ottoman Empire.

See: OALT (561-562), SSM (175).

A1. [Astronomical Tables] - Cairo (Ṭal`at mīqāt 120), Istanbul (SM Hüsrev 232). A shorter version of the tables (No 1384, A1) of Ṣāliḥ Efendi.

A2. Ikhtilāf mā bayna'l-ufq al-haqīqī wa'l-marī - is mentioned in OALT.

A3. Tashīl al-Kawākib al-Sab`a al-Sayyāra. - Istanbul (Kandilli 250).

1386. MUHAMMAD KURDILI

Muḥammad ibn `Abd al-`Azīz ibn Muḥammad ibn `Alī ibn Aḥmad ibn Idrīs Kurdīlī (18th c.), astronomer.

See: MAMS (II 648).

A1. Poem on Twenty Eight [Lunar] Stations (Manẓūma fī'l-manāzil al-thamāniyya wa'l-`ishrīn) - Rabat (2538). Poem was written in 1721.

1387. MUHAMMAD SA`ID MUFTI-ZADA YANISHAHRI (MÜFTİ-ZADE-İ YENİŞEHRİ MEHMED SAİD)

Muftī-Zāda-yi Yanīshahrī Muḥammad Sa`īd ibn al-Ḥājj Maḥmūd Efendī ibn al-Ḥājj Ḥasan Efendī ibn Aḥmad al-Hūddād (d. 1767), Turkish astronomer (Muftī-Zāda = son of a mufti).

See: MAMS (II 648), OALT (458-461).

A1. Treatise on the Sine Quadrant with Two Arcs (Risāla-yi rub` al-mujayyab dhū'l-qawsayn) = Treatise on the Sine Quadrant Instrument and its use (Rub`-i mujayyab dhū'l-qawsayn alatī wa isti`mālī risālasī) T - Berlin (166) under first title), Istanbul (TK Haz. 1753/3 - under second title),

A2. Manzūm Küre Tarifnamesi. - Istanbul (Topkapı Hazine 1753/2; Kandilli 31).

A3. Jadwal Sā`āt Maṭāli` Baladiya li `Aṣrimā. - Istanbul (SM Esad Efendi 2055/5).

A4. Risāla fī al-Farq Bayna Sā`at al-Zavāl wa Sā`at al-Gharb. - Istanbul (SM Esad Efendi 3074/11).

A5. Risāla fī Rasm al-Dawā'ir al-Falakiyya fī Rub` al-Muqanṭarāt. - Istanbul (Topkapı Hazine 1753/11).

A6. Risāla Rub`-i Muqanṭar. - Istanbul (Topkapı Hazine 1753/5).

A7. Risāla fī al-Rub` al-Shīkāzī. - Istanbul (NO 2918/4, 4971/1).

1388. MUHAMMAD `ALI HAKIM

Muḥammad `Alī Ḥakīm (18th c.), sheikh, astronomer, and naturalist.

See: MAMS (II 649).

A1. Treatise on the Science of the Globe and the Method of its Construction (Risāla dar `ilm-i kura wa ṭarīq-i `amal) = Forty Chapters on the Knowledge of the Globe (Chihil bāb dar ma`rifatı-i kura) P - Tashkent (465/2, 466/2, 10879/1). Description of the manuscripts: SVR (VI 103-104, X 109-110).

Mt1. Concise [Book] on Explanation of Celestial Events (Mukhtaṣar dar bayān-i āthār-i `ulwī) - Tashkent (10879/2). Description of the manuscript: SVR (X 113). Treatise in 12 chapters on meteorology and appearance of minerals and metals.

1389. NUR AL-DIN AL-KHAFAJI

Nur al-Dīn al-Khafājī (d. 1785), Ottoman astronomer.

See: GAL² (II 1024), MAMS (III 37), OALT (521-522).

A1. Corrected Reasoning on Properties of Operations with the Sine Quadrant (al-Qawl al-muhadhdhab fī kayfiyyat al-`amal bi'l-rub` al-mujayyab) - Berlin (5829; IGMN II. 46).

A2. Brightest Lamp on Properties of Operations with the Almucantar Quadrant (al-Sirāj al-anwar fī kayfiyyat al-`amal bi'l-rub` al-muqanṭar) - Berlin (5865; IGMN II. 45).

1390. ISMA` IL GALANBAWI (GELENBEVİ)

Ismā`īl Efendī ibn Muṣṭafā ibn Mahmoud al-Galanbawī (or Kalanbawī) al-Ḥanafī (1730-1790), born in Gelenbe near Manisa (Turkey); Turkish mathematician and astronomer, madrasa teacher.

See: MAMS (II 649), OALT (537-543), OMLT (251-259), OM (III 293-296), SSM (176), TIFI (290-291).

M1. Sides of a Triangle (Aḍlā`-i muthallathāt) T. Edition: Galanbawi [1]. The complete list is given in OMLT.

M2. Explanation of Logarithms (Sharḥ-i lugūrītma) = Explanation of Tables of Ratios of Logarithms (Sharḥ jadāwil al-ansab-i lugūrītma) T - Cairo (Ṭal`at riyāḍa. turkī 5, 11). The complete list is given in OMLT.

M3. Arithmetic of Fractions (Kusūrāt ḥisābī) = Arithmetic of Fractions. Treatise on Algebra and Almucabala (Ḥisāb al-kusūr. Risāla fi'l-jabr wa'l-muqābala) T - is mentioned in OM under the first title and in OMLT under the second title.

A1. Qibla (Qibla) T. Edition: Galanbawi [2].

A2. Treatise on the Science of Astronomy (Risāla fī `ilm al-hay'a) - Tashkent (467/3).

A3. Treatise on Knowledge of Times of Worships (Risāla fī ma`rifat awqāt al-`ibādāt) - Tashkent (9344/2).

A4. Treatise on the Knowledge of Worship and the Direction of Qibla (Risāla fī ma`rifat al-`ibādāt wa jihat al-Qibla) - Tashkent (7259/4).

A5. Treatise on Almucantar Quadrant (Risālat rub` al-muqanṭarāt) - Cairo (Ṭal`at mīqāt 101/1, Harput (332/3), Istanbul (SM Laleli 2718/1, Reşit Efendi 989/22, Esad Efendi 3580/3, 2014/1, Nafiz Paşa 1265; Köprülü III. Kısım 709/2; Cerrah Paşa Tıp Tarihi 594/3; Kandilli Rasathanesi 6/2, 15/2; BU 4643/6), Manisa (1704/4).

A6. Treatise on the Sine Quadrant Called Observatorial (Risāla fi'l-rub` al-mujayyab al-musammā bi'l-marāṣid) = Treatise on the Sine Quadrant (Risāla fi'l-rub` al-mujayyab) = Knowledge of the Sine Quadrant (Ma`rifat al-rub` al-mujayyab) = Observatorial (al-Marāṣid) - Cairo (mīqāt 881, 1063/7, Fāḍil mīqāt 165/1, Ṭal`at majlis 410/6), Istanbul (SM Laleli 2718/1, TK 7032), Princeton (Yehuda 3275), Vienna (1033/2, 1379, 2370).

A7. [Treatise on Sundial Called Triangle] - Cairo (Ṭal`at mīqāt 211/4).

A8. [Treatise on the Construction of Sundial for the Latitude 41^{o} (of Istanbul)] - Cairo (Ṭal`at mīqāt 211/3).

A9. Uṣūl Jadāwil Ansāb Sittīnī. - is mentioned in OALT.

A10. Kitāb al-Marāṣıd li Tabyīn fīhi Jāmi` al-Maqāṣıd. - Ankara (İl Halk 2259, Milli Kütüphane A. 155/3), Baghdad (Awqaf 5424/1, Mathaf al-Iraqi 654), Cairo (165, 881, mīqāt 1063/7, falak riyāḍa 4008 Talat majami 410/6, Talat mīqāt 101/1), Çorum (2982/1), Istanbul (SM Nafiz Paşa 1266, Laleli 2718/2, Nuri Efendi 155, Serez 1917, Esad Efendi 2012/1, 2014/2; Kandilli Rasathanesi 61, 415/5, 3/1, 6/1; Univ. AY. 3510, 861, 2895/1; Cerrah Paşa Tıp Tarihi 594/4; BU 4643/4; Topkapı Hazine 462; Arkeoloji Müzesi 592), Garrett (3275), Giresun (153/1), Konya (Yusuf Ağa 5000, 9887/1), Madina (Arif Hikmet 2962).

A11. Risāla fī rasm al-basīṭa bi ṭarīq al-ḥisāb wa'l-miqyās. - Ṭal`at mīqāt 211/3.

A12. Risāla fi'l-kura. - Rabat (449).

1391. MUHAMMAD AL-ASHMAWI

Muḥammad al-Shāfi`ī al-Janahī al-Ashmawī (18th c.), mathematician.

See: GAL^{2} (II 483), MAMS (II 650).

M1. Treatise on Transformations at Deals (Risāla fī taḥwīl al-mu`āmila) - Princeton (536). Treatise was written in 1770.

1392. ABU'L-`ABBAS AL-BIRUNI

Shihāb al-Dīn Abū'l-`Abbās al-Bīrūnī (18th c.), mathematician.

See: KZ (VI 325), MAMS (III 4).

M1. Commentary on "Delight on Numbers" (Sharḥ al-Nuzhat fi'l-a`dād) - Beirut (232/1). Commentary on the work (No 783, M7) of Ibn al-Hā'im.

1393. HABIBALLAH QANNAWJI

Ḥabīballāh Qannawjī (18th c.), from Qannawj, Indian mathematician.

See: STMI (397).

A1. Five Jewels of the Science of Arithmetic (al-Jawāhir al-khamsa fī `ilm al-ḥisāb) P - Hyderabad (riyāḍa. 566), Rampur (677b).

1394. MIRZA BADI-DIWAN

Mīrzā Badī`-dīwān ibn Shihāb al-Dīn-dīwān ibn Ulugh-dīwān (18th c.), diwan officer in Bukhara.
See: MAMS (II 650).

M1. Collection of Figures (Majma` al-arqām) P - Dushanbe (649), St. Petersburg (B 2147), Tashkent (2463/1), Tbilisi (AS 498/2). Description of the Tashkent manuscript: SVR (I 499). Russian translation by Vil'danova: Badi-diwan [1]. Research: Vil'danova [1-2]. Treatise contains chapters on arithmetic, algebra, and geometry.

1395. `UTHMAN AL-MUWARRAI

`Uthmān ibn Muḥammad al-Muwarraī (18th c.), mathematician.
See: GAL[2] (II 483), MAMS (II 650), OMLT (188).

M1. Explanation of Foundations of the Science of Measurement (al-Qawā`id al-waddāḥa fī `ilm al-misāḥa) - Leiden (2819). Treatise was written in 1742.

1396. `ABDALLAH IBN HASAN `ALI

`Abdallāh ibn Ḥasan `Alī (18th c.), Indian astronomer.
See: STMI (276).

A1. Calendar of `Abdallah ibn Ḥasan `Alī (Taqwīm-i `Abdallāh ibn Ḥasan `Alī) P - London (Ind. 2262). Almanac containing chronological and astronomical tables.

1397. KARIM BAKHSH

Karīm Bakhsh (18th c.), Indian mathematician.
See: MAMS (III 22), PL (II 17-18), STMI (400).

M1. Support of Arithmetic (`Umda al-ḥisāb) P - Aligarh (Azad. Habib 45/5), Hyderabad (jadid 88, riyāḍa. 135, 191; Said. riyāḍa. 6), Tehran (Univ. Ilah. 1035). Treatise was written in 1786 for Deccan Prince Arastu Jah.

M2. Selected from "Support" (Intikhāb-i `Umda) P - Hyderabad (riyāḍa. 191). Treatise was written in 1790.

1398. NIZAM AL-DIN AL-SHAHID

Niẓām al-Dīn Aḥmad ibn Muḥammad `Abdallāh al-Shahīd (d. 1775), Indian mathematician.
See: STMI (414).

M1. Generous Grace in Commentary on "Essence of Arithmetic" (Fayḍ al-wahhāb fī sharḥ Khulāṣat al-ḥisāb) P - Hyderabad (Said riyāḍa. 7), London (Ind. 2252 - incomplete). Commentary on the work (No 1058, M1) of al-`Āmilī, dedicated to `Abd al-Wahhāb Khān.

1399. AL-HASAN AL-SAFAWI

Abū Ṭabīb al-Ḥasan al-Ḥusaynī al-Safawī (d. ca 1810), astronomer.
See: STMI (290).

A1. Treatise on New Astronomy (Risāla dar hay'a jadīda) P - Rampur (1237).

1400. MUHAMMAD AL-FARAQI

Muḥammad ibn Yūsuf al-Zaki al-Faraqī al-Shāfi`ī (18th c.), mathematician.
See: STMI (407).

M1. Super-commentary on Commentary on "Light" (al-Ḥāshiyya `alā Sharḥ al-Lum`a) - Calcutta (1457). Super-commentary on Commentary (No 873, M8) by Sibṭ al-Maridīnī on the work (No 783, M6) of Ibn al-Hā'im.

1401. MUHAMMAD BARAKAT

Mawlawī Muḥammad Barakāt (18th c.), Indian mathematician.
See: STMI (407).

M1. Commentary on "Exposition of Elements of Geometery and Arithmetic" (Sharḥ taḥrīr uṣūl al-handasa wa'l-ḥisāb) - Aligarh (Azad. Jawahir 295), Hyderabad (jadid 1041; Osm. 1061), Patna (2435-2436), Rampur (riyāḍa. 44). Treatise was written in 1756.

1402. INDARMAN HISARI

Indarman Ḥisārī (18th c.), Indian mathematician.
See: PL (II 17).
M1. Rules of Arithmetic (Dastūr-i ḥisāb) P - Patna (1037). Treatise was written in 1766.

1403. `ABD AL-LATIF MUNAJJIM

`Abd al-Laṭīf Munajjim (18-19th c.), astrologer (al-munajjim), astronomer, and mathematician.
See: STMI (383).
M1. Subtleties of Arithmetic (Laṭā'if al-ḥisāb) P - Hyderabad (Salar riyāḍa. 19).

1404. MUSTAFA AL-WAFAI AL-KHAYYAT

Abū'l-Itqān Muṣṭafā al-Wafā'i al-Khayyāṭ (d. 1789), Egyptian astronomer, descendant of a tailor (khayyāṭ = tailor).
See: OALT (526-528), SSM (115).
A1. Useful Knowledge of the First Node from the Beginning Nodes of Five Planets next to Mercury and the Moon (Fā'ida fī ma`rifat bu`d awwal `uqd min uqūd al-ibtidā' wa mā yaqūmu maqāmahu fi'l-darari al-khamsa ghayr `Uṭārid wa'l-qamar) - Cairo (mīqāt 561/2, Fāḍil mīqāt 94/2). Treatise on the compilation of ephemerides of planets.
A2. Method of Calculation of the Declination of Qibla at Cairo by Kushyar (Ṭariq ḥisāb inḥirāf Qiblat Miṣr `alā mā dhakarahu al-`allāma Kushyār) - Cairo (Fāḍil mīqāt 213/5). Calculation of Qibla at Cairo according Ibn Labbān (No 308).
A3. Calculation of the Declination of Qibla at Cairo by the Method of Ulugh Beg (Ḥisāb inḥirāf Qiblat Miṣr bi ṭarīq Ulugh Beg) - Cairo (Fāḍil mīqāt 213/3). Calculation of Qibla at Cairo according to Ulugh Beg (No 816).
A4. [Planetary Tables for Cairo] - Cairo (mīqāt 726). Tables for (ca 1765) based on the parameters of the Al-Zīj of Ulugh Beg (No 816, A1).
A5. [Star Catalogue for 1180 h.] - Cairo (falak 4030/1, Fāḍil mīqāt 60). Star catalogue for 1766.

1405. MUHAMMAD `UTHMAN

Muḥammd `Uthmān (18th c.), Egyptian astronomer, pupil of al-Wafā'i al-Khayyāṭ (No 1404).
See: SSM (115).
A1. [Tables for Marking the Curves on Astrolabe Plates] - Cairo (mīqāt 640/3).

1406. MUHAMMAD AL-FARGHALI

Shams al-Dīn Muḥammad ibn `Abdallāh Fath al-Farghalī al-Sabarbāwī al-Shafi`ī (d. 1795), Ottoman astronomer born in Sabarbā near Tanta, Egypt.
See: MAMS (III 46-47), OALT (548-549).
A1. Treatise on Drawing Almucantar and Sine Quadrants (Risāla fī rasm al-rub` almuqant`ar wa'l-mujayyab) - Cairo (mīqāt 90).

1407. ISHAQ EFENDI (BAŞ HOCA İSHAK EFENDİ)

Isḥāq Efendī Bashhoja (1774-1836), Ottoman mathematician, astronomer, and engineer; one of the pioneers of modern sciences in the Ottoman Empire. He was instrumental in introducing modern sciences to the Islamic world through his numerous translations, adaptations and compilations from European languages, thus furthering the progress of education. He made significant contributions to Ottoman science by developing modern scientific terminology.

See: MAMS (II 632), OALT (577-579), OMLT (280-283), OM (III 255-256); Ihsanoğlu [1], [5] (101), Kuran [1] (EI²).

M1. Collection of Mathematical Sciences (Majmū`at `ulūm riyāḍiyya). Edition: Isḥāq Efendi [1]. The complete list is given in OMLT.

M2. Fire Solids and Spherical Triangles (Ajsām nāriyya wa muthalathāt kuriyya) - Edition: Ishaq Efendi [2]. Under the first title, the second title is given in OMLT.

A1. Reflection in Mirrors for Taking Angles (`Aks al-marāyā fī akhdh al-zawāyā) - Istanbul (Teknik Univ. BTTAM 25). Treatise on the sextant, octant and other astronomical instruments.

A2. Küre Risalesi. - is mentioned in OALT.

A3. Risālat al-jayb - Edirne (Selimiye 2101/1), Istanbul (Uni. TY. 714/2, Kandilli 345/2)

A4. Majmū`a `ulūm al-riyaḍiya is mentioned in OALT.

1408. MUHAMMAD ZAMAN FAYYAD

Muḥammad Zamān Fayyāḍ (18-19th c.), Indian mathematician.

See: STMI (408)

Commentary on "Essence of Arithmetic" (Sharḥ khulāṣat al-ḥisāb) P - Hyderabad (Osm. 1170). Commentary on the work (No 1058, M1) of al-`Āmilī.

1409. MANNUN LAL FALSAFI

Mannūn Lāl Falsafī (18-19th c.). Indian philosopher and mathematician.

See: STMI (409).

M1. Treatise on Arithmetic (Risāla fī'l-ḥisāb) - Rampur (414).

1410. NAJM AL-DIN KHAN KAKORAWI

Qāḍī al-quḍāt Muḥammad Najm al-Dīn Khān ibn Muḥammad Ḥamīd al-Dīn Kākorawī (d. 1814), (qāḍī-al-quḍāt = judge of judges), rais of Kakori, near Lucknow; died in Benares (all in India); mathematician.

See: MAMS (III 33), PL (II 18), STMI (327, 415).

M1. Treatise on Algebra and Almucabala (Risāla dar jabr u muqābala) P - Aligarh (Azad Subh. 1), Calcutta (Curz. 579/1; Buhar 223), Dushanbe (4449/10), Lahore (Univ.), Leiden (552), Mashhad (7671). Editions: Kakorawi [1], editions appended to al-`Āmilī [1a]. Tajiki transcription and Russian translation by Khojiyev: Kakorawi [2, 3]. Versed treatise on algebra.

M2. Rule for Extraction of Cubic Roots (Qā`ida-yi istikhrāj-i ka`ab) P - Calcutta (Curz. 1433/2).

A1. [Treatise on Indian Eras] - Calcutta (1504), London (1013/2).

A2. Treatise on Investigation of the Year (Risāla dar taḥqīq-i sana) P - Calcutta (1504). Treatise on the Solar and Lunar year and calculation of dates, it was written in 1796.

1411. MUHAMMAD IBN AL-IMAM

Muḥammad ibn Aḥmad ibn al-Imām (d. 1802), astronomer.

See: STMI (325).

A1. Calling Breaths on Ascents of Arab, Greek, and Persian Days of Months (al-Nafḥāt al-nadiyya fī ṭawāli` ayyām al-shuhūr al-`arabiyya wa'l-rūmiyya wa'l-farisiyya) - London (Sup. 772)

1412. MIR MUHAMMAD HUSAYN ISFAHANI LANDANI

Mīr Muḥammad Ḥusayn Iṣfahānī Landanī ibn Sulaymān `Abd al-`Aẓīm Iṣfahānī Landanī (d. 1790), astronomer from Isfahan, born in London.

See: STMI (333).

A1. Treatise on English Astronomy (Risāla-yi hay'at-i Angrezī) - Hyderabar (riyāḍa. 219; Osm. 283).

1413. PANDIT RAJ NIMDHAR

Pandit Rāj Nīmdhar (18-19th c.), Indian astronomer.

See: PL (II 96), STMI (345).

A1. Pleasant [Treatise] (Dil pasand) P - Lahore (Univ.). Treatise on astronomy dedicated to Amir Khān, ruler of Tonk.

1414. GHASI RAM DIHLAWI

Ghāsī Rām Dihlawī (18-19th c.), from Delhi, Indian mathematician.
See: PL (II 17).
M1. Arithmetic Collection (Majma' al-ḥisāb) P - Lahore (Univ.). Treatise was written in 1790.

1415. `ABDALLAH MAHARAT KHAN

`Abdallāh Mahārat Khān ibn `Aẓīm al-Dīn Muḥammad Khān (18th c.), Indian astronomer.
See: PL (II 94), STMI (275-276).
A1. Simplification of Al-Zīj of Muḥammad Shah (Tashīl-i Zīj-i Muḥammad Shāhī) P - Edinburgh (417), Hyderabad (riyāḍa. 297), Madras (Firuz 17, Sup. 2), Manchester (Lind. 697), Patna (1057), Tehran (Sipahsalar 670). Simplification of the al-Zīj (No 1322, A1) of Jay Singh.

1416 IBRAHIM AL-`ALAI

Ibrāhīm ibn `Abd al-Qādir ibn Ibrāhīm al-`Alā'ī (18-19th c.), Turkish mathematician.
See: MAMS (III 19) , OMLT (238-240).
M1. Treatise on Arithmetic (Risāla fi'l-ḥisāb) - Princeton (Yehuda 3225). The complete list is given in OMLT.

1417. GHULAM-HUSAYN JAWNPURI

Ghulām-Ḥusayn ibn Fatḥ-Muḥammad Karbalāī Jawnpūrī (1790-1850), Indian mathematician and astronomer.
See: PL (II 19-20, 99), Ansari and Sarma [1].
E1. Collected for Bahadur-Khān (Jāmi` Bahādur-Khānī) P - Calcutta (Curz. 580), London (1038/1). Edition: G. Jawnpuri [1]. Research: Tytler [3] (general), S. A. Rizvi [1] (trisection of an angle in the geometric part). Work in six parts plus introduction: 1) geometry, 2) optics, 3) arithmetic, 4) mensuration, 5) astronomy, 6) astronomical tables and almanacs; written in 1833. Research: Ansari and Sarma [1].
A1. Al-Zīj of Bahadur-Khān (Zīch-i Bahādur-Khānī) P - Hyderabad (riyāḍa. 68). Al-Zīj was written in 1825.
A2. Friend of Lovers on Explanation of Problems of the Astrolabe (Anīs al-aḥbāb fī bayān masā'il al-asṭurlāb) P - Patna (1063). Commentary on the work (No 1058, A6) of al-`Āmilī.
A3. Terms of the Calendar (Iṣṭilāḥāt al-taqwīm) - Calcutta (Sup. 901), Patna (1062).

1418. SAFDAR `ALI KHAN SHIRAZI

Safdar `Alī Khān ibn Muḥammad Ḥusayn Khān ibn Muḥammad Ismā'il Shirāzī Qādharūnī (d. 1808), from Shiraz, Indian mathematician and astronomer.
See: STMI (356).
MA1. [Notes on Works of Mathematics and Astronomy] P - Aligarh (Azad Subh. 520/1).
A1. Al-Zīj of Mir `Alam (Zīj-i Mīr `ālamī) P - Hyderabad (riyāḍa. 301). Al-Zīj is dedicated to the Prime Minister of Hyderabad.
A2. Al-Zīj of Safdar (Zīj-i Safdarī) P - Hyderabad (Salar hay'a 15).

1419. HUSAYN EFENDİ MASDARIYAJI (MASDARİYECİ-ZADE HÜSEYİN EFENDİ)

Turkish mathematician (d. 1825)
See: MAMS (III 45), OMLT (273-275).
M1. Treatise on Division of an Angle (Risāla fī taqsīm al-zāwiya) T - Istanbul (SM 844).
M2. Treatise on Geometry (Risāla fi'l-handasa) T - Istanbul (Köprülü 339; NO 2966).

1420. MUHAMMAD AL-`IRAQI

Muḥammad ibn `Alī ibn Sallūm al-`Irāqī (d. 1831), Ottoman mathematician.

See: MAMS (III 27), OMLT (279).

M1. Pupil of the Eye of the Skilful for Finding the Unknown for Operations of two Errors by Plates (Qurrat `ayn al-mahara li ithbāt istikhrāj al-majhūl bi `amal al-khaṭa'ayn bi'l-kaffāt) - Baghdad (2952).

1421. `ABD AL-QADIR AL-ADHAMI

`Abd al-Qādir ibn `Abd al-Qādir al-Ḥusaynī al-Adhamī al-Ṭarābulusī al-Ḥanafī (d. 1907), from Tripoli, Ottoman astronomer.

See: GAL^2 (II 1018), MAMS (III 5), OALT (691-692).

A1. Opening of Desired of Peculiarities of Times of Planets (Fawātiḥ al-raghā'ib fī khuṣūṣiyāt awqāt al-kawākib) - Alexandria (huruf 15/3).

1422. SAYYID `ABDALLAH AL-QUNYAWI (Al-KONEVİ)

Sayyīd `Abdallāh ibn Shukrī ibn `Abd al-Karīm al-Qunyawī (d. 1857), from Konya (Turkey), Turkish mathematician and astronomer.

See: MAMS (III 38), OALT (598-599), OM (III 285).

A1. Explanation of "Comprehension" in Commenting "Explanation of Celestial Spheres" (Tawḍīḥ al-idrāk `alā sharḥ Tashrīḥ al-aflāk) - Baku (B 2121/3), Istanbul (SM Şehit 1819/1). Commentary on the work (No 1058, A1) of al-`Āmilī.

A2. Correction of Propositons in Explanation of "Comprehension" (Tanqīḥ al-ashkāl `alā Tawḍīḥ al-idrāk) - Baku (B 2121/4), Istanbul (SM Şehit 1819/2).

1423. MUSHIR AL-DAWLA MUHANDIS-BASHI

Mushīr al-Dawla Mīrzā Sayyid Ja`far Khān Ḥusaynī "Muhandis bāshī" (Muhandis-bāshī = chief geometer) (d. 1862) from Farahan; son of Muḥammad-Taqī Ḥusaynī, wazīr-i Tabrīzī; Iranian mathematician and diplomat; was ambassador in Istanbul and London. Member of Erzurum Commission for establishing the Ottoman-Iranian border; chairman of Majlis-i Shūrā-yi wuzarā' and chief mutawalli of the shrine of Riḍā in Mashhad.

See: PL (I 1070, II 21), PL^2 (II 962-964, III 1485); Iqbāl [3], Mushīrī [1].

M1. Arithmetic (Ḥisāb) - Tehran (5210/2).

Edition: Mushīr al-Dawla [1].

MATHEMATICIANS, ASTRONOMERS AND SCHOLARS WHOSE TIME OF LIFE IS UNKNOWN

01. `Abbās Qūlī Sharīf Rāzī, astronomer from Rayy

See: MAMS (III 4)
A1. Concise [Book] on the Science of the Astrolabe (Mukhtaṣar-i `ilm-i asṭurlāb) P - Mashhad (8547/6).

02. Abū'l-`Abbās al-Shāfi`ī, astronomer

See: MAMS (III 4).
A1. Treatise on Operations on Times and Determining the Azimuth and Sides (Risāla a`māl al-awqāt fī istikhrāj al-sumūt wa'l-jihāt) - Mashhad (86).

03. `Abd al-`Azīz ibn `Abd al-Raḥmān al-Tabrīzī, astronomer from Tabriz

See: KZ (VI 32), MAMS (III 4).
A1. Starry Key (Miftāḥ al-nujūm) - is mentioned in KZ.

04. `Abd al-`Azīz al-Dumarī, astronomer

See: MAMS (III 4).
A1. Sapphires of Timekeeping (Yawāqīt al-mawāqīt) - Istanbul (SM AS 2711).

05. `Abd al-`Azīz Hīmadhī, mathematician

See: MAMS (III 4).
M1. Core of Arithmetic (Lubāb al-ḥisāb) - Tehran (3280/25).

06. Abū'l-Faḍl `Abd al-`Azīz ibn Abī Jum`a al-Tujībī, mathematician.

See: MAA (203), MAMS (III 4).
A1. [Poem on Arithmetic] - Escorial (II 954/6). Description of the manuscript - Derenbourg [7] (87).

07. `Abd al-Jabbār Khujandī, astronomer from Khujand

See: MAMS (III 5).
A1. Introduction [to Astronomy and Astrology] in Verses (Madkhal-i manẓūm) P - Cairo (mīqāt 2/2, 13/3), Isfahan (27/5), Tehran (2383/23, 2412/3, 2421/3, 2794/7, 4158/1, 4345/6; Farhad 5/2; Nafisi 753; Univ. 302/3, 1402/2, 2093/35, 2160/8, 2449/2, 3382/7, 3529/3, 3557/1, Adab. 207/4, 354/1, Huquq 302/4, Ilah. 197/1, Piz. 278/2).

08. `Abd al-Karīm ibn Fāris

See: GAL[2] (II 1018), MAMS (III 6).
A1. Poem on the Science of Timekeeping (Urjūza fī `ilm al-mīqāt) - Mosul (45/66).

09. `Abd al-Khāliq al-Bukhārī, mathematician from Bukhara

See: MAMS (III 9).
M1. Key to Chapters for Friends (Miftāḥ al-abwāb li'l-aḥbāb) P - St.Petersburg (A 922).

010. `Abdallāh ibn Abdāḥ Sawīz, astronomer

See: MAMS (III 6).

A1. Stripe of the Azimuth (Marqa`at al-samt) T - Istanbul (NO 2949).

011. `Abdallāh As`ad ibn Abī `Umar al-Kāshgharī, mathematician

See: MAMS (III 6).

M1. Basic Treatise on Methods of Arithmetic (al-Risāla al-`umdiya fī'l-ṭuruq al-ḥisābiyya) - Istanbul (SM AS 2739).

012. `Abdallāh ibn Ashraf Ṣiddiqī, Indian physicist, worked in Lucknow

See: STMI (469).

Me1. Investigation of Weights (Taḥqīq al-awzān) - Hyderabad (Osm. 1169).

013. Abū `Abdallāh al-Khaṭṭāb, astronomer

See: MAMS (III 7).

A1. Treatise on the Science of Astronomy (Risāla fī `ilm al-falak) - Saywun (al-Kaf 5).

014. `Abdallāh Khurāsānī, mathematician from Khurasan

See: MAMS (III 7).

M1. Treatise on Numbers of Magic Square (Risāla dar a`dād-i wafq) P - Cairo (riyad. 9).

015. Abū `Abdallāh al-Marūnī, astronomer

See: MAMS (III 7).

A1. Commentary on Concise Introduction to the Knowledge of Determining the [Time] by Night and Day (Sharḥ muqaddima mukhtaṣara min ma`rifat a`māl istikhrāj al-layl wa'l-nahār) - St.Petersburg (B 2999/11).

016. `Abdallāh ibn Muhammad al-Harawī, mathematician from Heart

See: MAA (228), MAMS (III 7).

M1. Treatise that Euclid's Book "Elements" is Based on the Logical Work on its Premises (Risāla fī anna kitāb Uqlīdis fī'l-Uṣūl mabnī `alā'l-ta'līf al-manṭiqī fī muqaddimātihi) - Leiden (168/5).

017. `Abdallāh ibn Muḥammad ibn al-Mustaṣir, mathematician

See: GAL[2] (II 1018), MAMS (III 7).

M1. Rule for Determining Fractions (Qawā`id fī istikhrāj al-kusūr) - Alexandria (Fun. 133/13).

018. `Abdallāh (`Ilmallāh) ibn Sheikh `Ubaydallāh ibn Sheikh `Īsā al-Sadīqī al-Suhrawardī Indian mathematician, born in Goha Maw near Khayrabad, Oudh

See: MAMS (III 6), STMI (420).

M1. Exposition of Arithmetic (Basṭ al-ḥisāb) P - Rampur (1241; Nadhir 246). Treatise is dedicated to Mir Sayyid `Abd al-Muqtadir.

019. `Abdallāh Yazdī, mathematician from Yazd

See: MAMS (III 6).

M1. Rules of Four Figures (Ḍābiṭat ashkāl arba`a) - Tehran (Univ. 1952).

020. `Abdallāh ibn Yūsuf ibn `Abdallāh al-Ḥalabī, mathematician from Aleppo

See: GAL[2] (II 1018), MAA (202), MAMS (III 6).

M1. Gift to Selected on the Science of Ghubar (Tuḥfat al-akhyār fī `ilm al-ghubār) - Gotha (1492/1). Description of the manuscript: Pertsch [3] (118).

021. `Abd al-Qādir ibn Aḥmad ibn Sha`bān al-Awfı, mathematician

See: MAMS (III 5).
M1. Comments on Poem on Finger Reckoning (Ta`līq `alā Manẓūma fī ḥisāb al-yad) - Princeton (Yehuda 1028). Commentary on the work (No 910, M1) of Ibn al-Maghribī.

022. `Abd al-Qādir al-Azharī, mathematician

See: GAL[2] (II 156), MAMS (III 5).
M1. Means for Delight of Hearts in the Science of Arithmetic (Wasīlat nuzhat al-albāb fī `ilm al-ḥisāb) - Rampur (I 70).

023. `Abd al-Raḥīm ibn Aḥmad ibn Muḥammad ibn Muḥammad ibn Ibrāhīm ibn Khalīd ibn `Abdallāh, astronomer

See: STMI (277).
A1. Book of Right Direction for the Knowledge of Times (Kitāb al-irshād ilā ma`rifat al-awqāt) - Hyderabad (riyad. 157).
A2. Knowledge of Operations with the Astrolabe (Ma`rifat al-a`māl bi'l-asṭurlāb) - Hyder-abad (riyad. 156).

024. `Abd al-Raḥīm ibn Sheikh Muḥammad Riḍā Karābisī, mathematician

See: MAMS (III 8).
M1. Removal of the Veil (Kashf al-ḥijāb) - Tehran (5250).

025. `Abd al-Salām ibn Aḥmad ibn Zānūr, astronomer

See: MAMS (III 9).
A1. Sufficient for the Perspicacious on Timekeeping by Operation with Ratio and Sines (Kifāya al-labīb fī'l-tawāqīt bi'l-nisba wa'l-juyūb) - Rabat (2536).

026. `Abd al-Walī, mathematician

See: MAMS (III 5).
M1. [Arithmetic Treatise] P - Manchester (352/0).

027. Farīd al-Dīn Aḥmad, mathematician

See: MAMS (III 12).
M1. Uses of Reflections on the Science of Compasses (Fawāid al-afkār fī `ilm al-firkār); Hyderabad (riyad 166).

028. Shihāb al-Dīn Aḥmad, astronomer

See: MAMS (III 12).
A1. Altitude (Irtifā`) - Konya (1042/8, 13).

029. Shihāb al-Dīn Aḥmad, sheikh and mathematician

See: MAMS (III 12).
M1. Gratifying Text on Arithmetic (Matn al-nuzha fī'l-ḥisāb) - Mosul (Jalili 177/2).

030. Abū'l-`Abbās Aḥmad ibn `Abd al-Jalīl al-Sharāibı, mathematician

See: GAL[2] (II 1019), MAMS (III 12)
M1. Concise [Treatise] on the order of Fractions (al-iqtiṣār fī sabṭ al-kusūr) - Rabat (457/3).

031. Aḥmad ibn `Abdallāh al-Barakadīnī, astronomer

See: GAL² (II 1019), MAMS (III 12).
A1. Problems of Astronomy (Masāil al-hay'a) - Gotha (1395), London (Sup. 764/8). Treatise on 15 kinds of quadrants.

032. Aḥmad ibn Aḥmad ibn Ja`far, mathematician

See: MAMS (III 13).
M1. Book on Division of Areas (Kitāb fī qisma al-arāḍī) - Patna (2928/6).

033. Aḥmad ibn `Alī al-Fākhurī, astronomer

See: GAL² (II 1019), MAMS (III 13).
A1. Treatise on the Construction of the Quadrant for [All] Horizons (Risāla fī `amal al-rub` al-āfāqī) - Paris (2524).

034. Aḥmad ibn `Alī ibn `Umar ibn Ṣāliḥ al-Irbīlī, mathematician from Irbil

See: MAMS (III 12).
M1. Sufficient (al-Kifāya) - Istanbul (SM Fatih 3441/3). Description of the manuscript: SHIM (513).

035. Abū'l-Qāsim Aḥmad ibn Abī Bakr, astronomer

See: KZ (III 365), MAMS (III 13).
A1. Treatise on the Astrolabe and its Construction (Risālat al-asṭurlāb wa `amalihi) - is mentioned in KZ. Book in 66 chapters.

036. Sharaf al-Dīn Aḥmad al-Bayhaqı, mathematician from Bayhaq, Khurasan

See: MAMS (III 13).
M1. Indian Arithmetic (Ḥisāb al-hind) - Tashkent (6131/6).

037. Aḥmad ibn Ḥasan ibn Muḥammad ibn Ḥasan Ḥar `Āmilī, astronomer

See: MAMS (III 16).
A1. Commentary on "Explanation of Celestial Spheres" (Sharḥ Tashrīḥ al-falak) - Mashhad (Gawharshad 2044/1). Commentary on the work (No 1058, A1) of al-`Āmilī.

038. Abū Yūsuf Aḥmad ibn al-Ḥusayn al-Ḥāsib, mathematician

See: MAMS (III 16).
M1. Algebra and Almucabala (al-Jabr wa'l-muqābala) - Baghdad (Islam. 140).

039. Aḥmad ibn `Īsā, physicist

See: MAMS (III 13).
Ph1. Book on Optics and Burning Mirrors (Kitāb al-manāẓir wa marāyā al-muḥriqa) - Istanbul (Ragıp 934; SM Laleli 2759/2). Description of the manuscript: SHIM (513-514). Book in 5 chapters: 1) eye and vision, 2) column seen on the side of heaven and fire coloured clouds, 3) parallaxis, 4) rainbow, 5) duplication of vision. While Euclid, Aristotle, Hippocrates, and Galenus are mentioned, oriental scientists are not mentioned.

040. Abū'l-Ṣiddīq Aḥmad ibn `Īsā al-`Ajabī, astronomer

See: MAMS (III 14).

A1. Arithmetic of Problems with Sines and Astronomical Operations (Fī ḥisāb al-masāil al-jaybyya wa'l-a`māl al-falakiyya) - Berlin (IGMN II. 15), Oxford (II 286/6). Description of the Berlin manuscript: Ruska and Hartner [1] (183-184). Book in 10 chapters. Commentary on the work (No 873, A7) of Sibt al-Maridini.

041. Abū'l-`Abbās Aḥmad ibn Ismā`īl al-Ṣūfī, astronomer

See: MAMS (III 14).
A1. Treatise on the Circle of Azimuth (Risāla-yi dāira-yi samt) T - Istanbul (NO 2925).

042. Aḥmad Khalīfa, mathematician

See: MAMS (III 15).
M1. Treatise on Arithmetic (Risāla fi'l-ḥisāb) P - Istanbul (SM AS 2734).

043. Aḥmad ibn Maḥmūd al-Yazdī, mathematician from Yazd

See: MAMS (III 14).
M1. Treatise on Arithmetic (Risāla fi'l-ḥisāb) - Istanbul (SM Laleli 2720).

044. `Izz al-Dīn Aḥmad ibn Muḥammad al-Baghdādī, mathematician from Baghdad

See: MAMS (III 14).
M1. Problem on an Assertion of Euclid (Mas'ala fī da`wā Uqlīdis) - Philadelphia (1488).

045. Aḥmad al-Nāib ibn Ḥusayn ibn Muḥammad al-Awsī al-Anṣārī al-Ṭarābulusı, astronomer from Tripoli

See: MAMS (III 15).
A1. Complete and Clear Proofs of Assertions on the Movement of Celestial Spheres and Immobility of the Terrestrial Globe (al-Barāhīn al-wāḍiha al-jaliyya `alā thubūt sayr al-aflāk wa-sukūn al-kura al-arḍiyya) - Princeton (Garr. 1018). Description of the manuscript: Hitti, Faris and Abd al-Malik [1] (320-321).

046. Aḥmad Nāṣir

See: MAMS (III 15), astronomer.
A1. Optics of Stars (Manāẓir al-kawākib) P - Kazan (5).

047. Aḥmad al-Ramaḍānī ibn Muḥsin al-Wazīrī, mathematician

See: MAMS (III 15).
M1. Solution of Geometric Problems Contained in the Text of [Treatise] of al-Taftazani (Ḥall al-masāil al-handasiyya al-mawjūda fī matn al-Shamsiyya li'l-Taftazānī) - Alexandria (Mun. 3018). Commentary on the treatise (No 772, M1) of al-Taftazani.

048. Shihāb al-Dīn Aḥmad Shāfi`ī, astronomer

See: MAMS (III 16).
A1. Treatise on the Science of Zodiacal Signs and Almucantars (Risāla dar `ilm-i burj [wa] muqanṭar) P - Mashhad (5315).
A2. Treatise on Operations with the Almucantar Quadrant (Risāla dar `amal bi-rub`-i muqanṭar) P – Mashhad (88).

049. Aḥmad ibn Shihāb al-Dīn, astronomer

See: GAL[2] (II 1019), MAMS(III 16).

A1. Gift to Student on the Science of Planets (Tuḥfa al-ṭālib fī `ilm al-kawākib) – Alexandria (huruf 9/4). Astronomical poem.

050. Aḥmad ibn Yūsuf ibn `Abd al-Qādir al-Jazirī, mathematician

See: GAL[2] (II 1019), MAMS (III 14).

M1. [Treatise] Detecting the Enveloping and the Enveloped Related to States of Raising, Equality, and Reduction (Kashīfa al-muḥīṭ wa'l-muḥā ṭ li inḍibāṭ aḥwālihi min sumuw wa istiwā wa inḥiṭāṭ) – Algiers (1510).

051. Abū Naṣr Aḥmad ibn Zarīr, astronomer

See: GAJ[2] (I 864), MAA (195), MAMS (III 13).

A1. [Treatise on Various Kinds of Astrolabes] – Leiden (591/3), Istanbul (TK 3505/4). Description of the Istanbul manuscript: SHIM (511).

052. Bahā al-Dīn Aḥrār, astronomer

See: MAMS (III 16).

A1. Treatise on Designation of Stars (Risāla dar arqām-i nujūm) P – Tashkent (463/6).

053. `Alī Aḥmad Peshawarī Qādirī Afghānī Bābarı, astronomer from Afghanistan, worked in Peshawar

See: STMI (293).

A1. Treatise on Distances and Sizes [of Planets] (Risāla-yi ab`ād-i ajrām) P – Aligarh (Azad. Sul. 529/8).

054. `Alī ibn Badr al-Tirmidhī, mathematician from Termez

See: MAMS (III 10).

M1. Commentary on Introduction to Algebra and Almucabala (Sharḥ al-muqaddama al-jabr wa'l-muqābala) – Kabul (Matb. 19).

055. Abu'l-Ḥasan `Alī al-Bahmanī, mathematician

See: MAMS (III 10).

M1. Commentary on [the Treatise for] `Ala al-Din (Sharḥ al-`Alāiyya) – St.Petersburg (B 1069/1). Commentary on the treatise (No718, M1) of al-Sughdi al-Turkistani.

056. `Alī al-Ḥasib, Egyptian mathematician (ḥāsib = reckoner)

See: MAMS (III 11).

M1. Explanation on the Science of Arithmetic (Mūḍiḥ fī `ilm al-ḥisāb) – Istanbul (Millet Feyzulla 1365). Description of the manuscript: Sayyid [3] (95).

057. `Alī ibn Ḥaydara, mathematician

See: KZ (II 400), MAMS (III 11).

M1. [Commentary on treatise "Concise Explanation of Arithmetic Operations" of Ibn al- Bannā.] – is mentioned in KZ. Commentary on the work (No 696, M1) Ibn al-Bannā.

058. `Alī Ja`farī al-Rūmī, astronomer from Turkey

See: STMI (293).

A1. Treatise on Description of the Sphere (Risāla dar sifat-i kura) P. – Hyderabad (Said. 1813).

059. `Alī ibn Khayr al-Dīn al-Ḥanafī, astronomer

See: MAMS (III 11).
A1. Limit of Lucidity in Determining Magnitudes of Time (Nihāya al-bayān fī ma`rifat maqādīr al-zamān) – Istanbul (NO 2957).

060. `Alī ibn Muḥammad ibn `Alī al-Maghribī al-Bujawī, astronomer from Bujaya, Algeria

See: MAMS (III 10).
A1. Introduction for the Beginners and Memoir for the Advanced on Determining Time by Calculation without an Instrument and a Book (Tabṣira al-mubtadī wa tadhkira al-muntahī fī ma`rifat al-awqāt bi'l-ḥisāb min ghayr āla wa lā kitāb) – Tripoli (Um. 1111/2, 1123/1).

061. `Alī Muḥammad ibn Imām Muḥammad Bādkūbī, mathematician from Baku

See: MAMS (III 10).
M1. Collection of Uses (Jāmi` al-fawāid) P, T – Baku (B 3098, 3898/1, 6247/1).

062. `Alī ibn Muḥammad Ma`ṣūm

See: MAMS (III 10).
E1. Comments on "Pearl of Crown" (Ḥāshiya `alā Durra al-tāj) – Tehran (Univ. 2296/2). Commentary on the work (No 668, E1) of al-Shirazi.

063. `Alī Rustam, mathematician

See: MAMS (III 10).
M1. Selected Arithmetic (Intikhāb al-ḥisāb) – Rawalpindi (Ganjbahsh 510/124). Description of the manuscript: Tasbihi [1] (330-331).

064. Tāj al-Dīn `Alī Shīrāzī, astronomer from Shiraz

See: MAMS (III 11).
A1. Determination of Calendars (Dar istikhrāj-i taqāwīm) P – Rasht (maj. 73/2).

065. `Alī ibn Yūsuf ibn `Alī, mathematician

See: MAMS (III 10).
M1. Core of Arithmetic (Lubāb al-ḥisāb) – Tehran (Univ. 5213).

066. Amīr `Abd al-Razzāq, mathematician

See: MAMS (III 11).
M1. Treatise on the Science of Projection onto a Plane (Risāla dar `ilm al-tasṭīḥ) P – Mashhad (5534).

067. Amīr ibn Ḥusayn Iṣfahānī, astronomer from Isfahan

See: MAMS (III 11).
A1. Ninety Chapters (Nuzdah bāb) P – Tehran (Malik 3451/2).

068. Āqā Hāshim Shāh, mathematician

See: MAMS (III 9).
M1. Essence of Hashim (Khulāṣa-yi Hāshimī) P – Hyderabad (riyad. 263).

069. As`ad ibn Aḥmad al-Ṣiddiqī, mathematician

See: MAMS (III 11).
M1. Treatise on Geometry (Risāla fi'l-handasa) – Istanbul (SM AS 2736).

070. Abū'l-Futūḥ As`ad ibn Abū'l-Faḍāil ibn Khālid al-`Ajalı astronomer, worked in Isfahan

See: MAMS (III 11).
A1. Book on the Construction of the Astrolabe (Kitāb ṣan`a al-asṭurlāb) – Istanbul (TK 3483/20). Description of the Istanbul manuscript: SHIM (515).

071. Al-`Ashmāwī al-Rifā`ī, mathematician and astronomer

See: MAMS (III 17).
MA1. [Treatise on Arithmetic and Astronomy] – Kaduna (567).

072. `Aṣim Muḥammad Kāẓim ibn Amīr Ḥusaynī, mathematician

See: MAMS (III 12).
M1. Explanation for Questions on the Science of Joints of Fingers (Iḍā ḥ al-sāid fi `ilm `aqd al-anāmil) – Baku (B 2534).

073. `Ataallāh al-Ḥakīm Kamāl al-Dīn Ḥusayn al-Ṭibā' Ṭibā, astronomer

See: STMI (297).
A1. Seven Strong [Chapters] (al-Sab` al-shidād) – Hyderabad (Osm. 481, 1067-1068).

074. Shams al-Dīn `Azīz ibn Muḥammad al-Khidhrī, philosopher

See STMI (506).
Ph1. Treatise on Investigation of Matter (Risāla fi taḥqīq al-hayūla) – Hyderabad (Salar falsafa 40/1).

075. Badī`ī, mathematician

See: MAMS (III 17).
M1. Poem on Triangles (Naẓm al-muthallathāt) – Tashkent (4814/3).

076. Bahā al-Dīn Amlishī

See: MAMS (III 17).
A1. Khaqani Zīj (Zīj-i Khāqānī) P – Rasht (3, 42).

077. Zakī al-Dīn Abū Bakr `Abd al-Wahhāb al-Ṣafrawī, astronomer

See: KZ (III 388), MAMS (III 5).
A1. Treatise on the Absent Sine (Risālat al-jayb al-ghayb) – is mentioned in KZ.

078. Abū Bakr ibn Aḥmad al-Sabtī, from Ceuta, knowledgeable in inheritance

See: MAMS (III 17).
M1. Commentary on al-Mutaqqina (Sharḥ al-Mutaqqina) – Alexandria (Mun. 92/2). Commentary on the work (No 493, M1) of al-Rahbi al-Mutaqqina.

079. Abū Bakr ibn Muḥammad al-Qudā`ī al-Qalilusī, mathematician

See: MAMS (III 17).

M1. Part [of a Work] on the Science of Arithmetic (al-Kisr fī `ilm al-ḥisāb) – Rabat (2445).

080. Chkhatrī Māl, Indian mathematician

See: STMI (393).
M1. Laudable Collection (Dīwān-i pasand) P – Hyderabad (riyad, 310).

081. Dildār `Alī, mathematician

See: STMI (394).
M1. Turn (al-Dāir) – Hyderabad (Osm. 1057).

082. al-Fahīm, sheikh and astronomer

See: MAMS (III 41).
A1. Seven Pearls (al-Durarī al-sab`) – Kaduna (299, 988).

083. Fakhr al-Millat wa'l-Dīn al-Sa` īdī, astronomer

See: MAMS (III 41).
AG1. [Treatise on Astronomy, Cosmology, and Geography] – Istanbul (SM Laleli 2141/4). Description of the manuscript: SHIM (516). Book in 12 chapters.

084. Farajallāh Ḥusaynī Kāshām, mathematician from Kashan

See: MAMS (III 40).
M1. Beginning of Arithmetic (Ṣadr al-ḥisāb) – Tehran (Univ. 1356, 1708).

085. Faṣīḥ ibn Athīr, astronomer and astrologer

See: MAMS (III 40).
A1. Elements of Astronomy and Astrology (Uṣūl-i nujūm u aḥkām) P – Tehran (Malik 6177). Book in 40 sections.

086. Abū'l-Futūḥ As`ad, mathematician

See: MAMS (III 41).
M1. Treatise on the Science of Measuring (Risāla dar `ilm-i misāhat) P – Mashhad (5462).

087. Abū'l-Futūḥ Tustarī, astronomer from Tustar

See: MAMS (III 41).
A1. Treatise on the Astrolabe (Risāla dar asṭurlāb) P – Mashhad (5509).

088. Ghulām Ḥusayn, Indian mathematician

See: STMI (397).
M1. Book of Siyaq (Kitāb al-siyāq) P – Hyderabad (riyad. 549).

089. Ghulām Rasūl Khalīfa, Indian mathematician

See: STMI (397).
M1. Form of Siyaq (Hay'at al-siyāq) P – Hyderabad (riyad. 552), Patna (2042).

090. Ḥājjī ibn Sa`Id al-Kurashī, mathematician

See: GAL^2 (II 1020), MAMS (III 41).

M1. Essence of the Method of Comprehension of Heights and Depths (Khulāṣā al-sulūk fī al-rif'a wa'l-sumūk) – Rampur (I 457).

091. al-Ḥakīm ibn Balghazān al-Tamīlī, sheikh and astronomer

See: MAMS (III 42).
A1. Key of Wisdom on Astronomy (Miftāḥ al-ḥikma fī'l-hay'a) – Istanbul (SM AS 2678).

092. Ḥāmid Bukhārāī, astronomer from Bukhara

See: MAMS (III 42).
A1. [Treatise on] Astrolabe in Verses (Asṭurlāb-i manẓūm) P – Mashhad (Mawlawi 446/9), Tehran (Malik 6358).

093. Ḥamīd ibn Ḥusayn al-Ḥāsib, astronomer (ḥāsib = reckoner)

See: GAS (VI 287), MAMS (III 42).
A1. Knowledge of the Azimuth of Qibla (Ma'rifat samt al-Qibla) – Oxford (I 877/11).

094. Ḥasan, astronomer

See: MAMS (III 42).
A1. Treatise on the Globe (Risālat al-kura) – Istanbul (SM Laleli 2716/1).

095. Al-Ḥasan ibn 'Abd al-Bārī' al-Ḥaddāl, astronomer

See: MAMS (III 42).
A1. Essence of the Imaged in the Science of Stars (Khulāṣa al-marsūm fī 'ilm al-nujūm) – Tarim (al-Kaf 79/6).

096. Ḥasan ibn 'Abd al-Raḥmān, mechanician

See: GAL[2] (II 1020), MAMS (III 43), STMI (398).
Me1. Explanation of the Position of Measure of Weights (Tawḍīḥ al-tibyān fī mi'yār al-mīzān) – Hyderabad (riyad. 45).

097. Ḥasan Afandī Shaṭṭī-zāda, Ottoman mathematician

See: GAL[2] (II 1020), MAMS (III 44).
M1. Stretching Hand for Obtaining Mesurement (Basṭ al-rāḥa li tanāwul al-misāḥa) – Beirut (243).

098. Abū'l-Ḥasan Kāshānī, mathematician from Kashan

See: MAMS (III 44).
M1. Treatise on Solution of Propositions of Euclid (Risāla fī ḥall ashkāl Uqlīdis) – Mashhad (5528).

099. Ḥasan ibn Khayr al-Dīn, mathematician

See: MAMS (III 43).
M1. Treatise on the Science of Arithmetic (Risāla fī 'ilm al-ḥisāb) P – Kazan (494).

0100. Ḥasan Muḥammad, astronomer

See: MAMS (III 43).
A1. Treatise on Knowledge of Operations with the Almucantar Quadrant (Risāla dar ma'rifat-i a'māl bi-rub'-i muqanṭar) P – Mashhad (89).

0101. Ḥasan ibn Muḥammad Qāḍī Ḥasan, astronomer

See: MAMS (III 43).

A1. Zīj of Ulugh Beg of Samarkand according to New Observations (Zīj Ulugh beg al-Samarkandī bi'l-raṣad al-jadīd) – Baghdad (Sup. 342). Revision of the zīj (No 816, A1) of Ulugh Beg.

0102. Abū'l-Ḥasan al-Shīrāzī, astronomer from Shiraz

See: KZ (III 366), MAMS (III 44).

A1. Treatise on the Astrolabe (Risāla fī'l-asṭurlāb) – is mentioned in KZ.

0103. Abū Zayd al-Ḥasan ibn `Ubaydallāh al-Fārisī, mathematician from Fars.

See: GAL[2] (II 1020), MAA (196), MAMS (III 43).

M1. Arithmetic Problems – Commentary on "Subtleties of Arithmetic" (al-Masail al-ḥisābiyya – sharḥ Nukāt al-arithmāṭiqī) – Leiden (199/7). Treatise was written in 1218.

M2. Commentary on the Poem on Operations of Arithmetic (Sharḥ `alā qaṣida fī a`māl al-ḥisāb) – Fas (Zawiya 21).

0104. Abū'l-Fatḥ Haydar ibn al-Ḥasan al-Iklīlī, astronomer from Iklil

See: STMI (284).

A1. [Treatise on Astrolabe] P – Oxford (I 925). Treatise in 9 chapters.

0105. al-Ḥaysūbī ibn al-Shāt, astronomer

See: MAMS (III 42).

A1. [Treatise on the Astrolabe] – Vienna (Acad. 337).

0106. al-Ḥijāzī al-Shāfi`ī, mathematician from Saudi Arabia

See: MAMS (III 44).

M1. Commentary on [the work] of Ibn al-Yāsamīn (Sharḥ al-Yasmīniyya) – Mosul (Jalili 177/1). Commentary on the work (No 521, M1) of Ibn al-Yāsamīn.

0107. Ḥusām al-Dīn ibn Shams al-Dīn al-Khiṭāī, astronomer from China

See: MAMS (III 46).

A1. Commentary on "Thirty Sections", called "Explanation of Drawings" (Sharḥ-i Sī faṣl al-musammā bi-mūḍīḥ al-rusūm) P – Istanbul (SM SM 2705). Commentary on the work (No 606, A16) of al-Ṭūsī.

0108. Ḥusayn Abīwardī, mathematician from Abiward, Khurasan

See: MAMS (III 45).

M1. Finger Reckoning (Angusht-i shumārī) P – Cairo (Tal`at 50).

0109. Ḥusayn ibn `Alī ibn Sharaf al-Dīn Mashhadī, mathematician from Mashhad

M1. "Essence" of Mansur (Khulāṣa-yi Manṣūrī) P – Tehran (3946). Treatise on arithmetic and geometry.

0110. Abū `Alī al-Ḥusayn ibn Ibrāhīm al-Samarkandī known as "Tāj al-zamān" (Crown of time); mathematician from Samarkand

See: MAMS (III 45).

M1. Book of Analysis and Synthesis on Solving Numerical Problems (Kitāb al-tarkīb wa'l-taḥlīl fī istikhrāj al-masāil al-`adadiyya) – Moscow (154/3).

0111. Ḥusayn ibn `Izz al-Dīn `Ushāqī, mathematician

See: MAMS (III 46).
M1. Treatise on Arithmetic (Risāla dar ḥisāb) P – Tehran (Malik 3209/2).

0112. Ḥusayn al-Jīlānī al-Mazandarānī, astrologer from Gilan

See: MAMS (III 45).
A1. Garden of Astrologers (Rauḍa al-munajjimīn) P – London (Sup. 11039).

0113. Al-Ḥusayn ibn Mūsā al-Harawī al-Ḥāsib (ḥāsib - reckoner) astronomer from Herat

See: MAMS (III 46).
A1. Book of Solution on Difficulties about the Movement of Planets (Kitāb ḥall al-mushkil fī masīr al-kawākib) – Istanbul (Köprülü 1624/5; SM Esmi 297/2). Description of the manuscripts: SHIM (517).

0114. Al-Ḥusayn ibn Zayd ibn `Alī al-Jaḥḥāf, Yemeni astronomer

See: MAMS (III 45).
A1. Book of Sapphires on the Knowledge of Timekeeping (Kitāb al-yawāqīt fī ma`rifat al-mawāqīt) – Berlin (5784).

0115. `Ibādallāh, astronomer

See: STMI (314).
A1. Fifty Sultan Chapters and the Astrolabe (Panjāh bāb sulṭānī wa asṭurlāb) P – Lucknow (46).

0116. Ibrāhīm Efendi, astronomer

See: GAL[2] (II 1021), MAMS (III 19).
A1. Joy of Minds in the Science of the Astrolabe (Bahjat al-albāb fī `ilm al-asṭurlāb) – Rabat (449/7).

0117. Ibrāhīm al-Farghānī, astronomer from Farghana

See: GAL[2] (II 1021), MAMS (III 19).
A1. Treatise on Islamic Astronomy (Risāla fi'l-hay'a al-islāmiyya) – Rampur (I 425).

0118. Abū'l-Fatḥ Ibrāhīm ibn Ḥājjī Zanjānı, mathematician from Zanjan

See: MAMS (III 19).
M1. Joints of Fingers (`Uqad al-anāmil) – Baku (B 4274). Treatise on finger reckoning.

0119. Ibrāhīm ibn Muḥammad al-Waḥdatī, astronomer

See: STMI (315).
A1. Treatise on the Knowledge of Hours (Risāla fī ma`rifat al-sā`āt) – Calcutta (1495/3).

0120. Abū Isḥāq Ibrāhīm al-Tādilī, mathematician from Tadla

See: MAMS (III 19).
M1. Gift to Friends on the Construction of the Astrolabe (Tuḥfat al-aḥbāb fī-`amal al-asṭurlāb) – Rabat (2441).

0121. Ibn Ilyās, mathematician

See: MAMS (III 19).

M1. Essence of Arithmetic (Zubdat al-ḥisāb) – Sofia (2197).

0122. ʿĪsā ibn Aḥmad ibn Yūsuf, mathematician

See: MAMS (III 19).

M1. Comments on an Indian Book on Arithmetic (Ḥawāshī ʿalā al-kitāb al-hindī fī'l-ḥisāb) – Cairo (V 84). Description of the manuscript: Sayyid [3] (44).

0123. Ismāʿīl ibn Luṭfallāh Bākharzī, mathematician

See: MAMS (III 20).

M1. Calculation of Multiplication and Multiplicant (Ḥisāb-i ḍarb wa maḍrūb) P – Tehran (Malik 5800/4).

0124. Ismāʿīl al-Muḥtasib (muḥtasib = reckoner), astronomer

See: GAL[2] (II 1021), MAMS (III 20).

A1. Concise Selection from the Science of Astronomy and Determining the Location of the Sun and the Moon in [Lunar] Stations (Nubdha mukhtaṣara min ʿilm al-falak wa maʿrifat ḥulūl al-shams wa'l-qamar fī'l-manāzil) – Rome (Vat. 1139/4).

0125. Isḥāq Munajjim ibn Yūsuf al-Ṭabīb (son of a physician), astronomer from Gilan (munajjim=astrologer)

See: MAMS (III 21), STMI (316).

A1. Treatise on Knowledge of the Calendar (Risāla dar dānistan-i taqwīm, [Risala dar] maʿrifat-i taqwīm) P – Baku (B 4527), Hyderabad (Salar 29), Tehran (Univ. 2950/75, Hukuk 111/2). Treatise on astronomy and astrology.

0126. ʿIzz al-Dīn al-Ḥusaynī, astronomer

See: STMI (317).

A1. Discussion of what is written by ʿIzz al-Dìn al-Husaynì (Abhāth min imlā-yì ʿIzz al-Dīn al-Ḥusaynī) – Hyderabad (Said. Hay'a 3/1). Resolution of some astronomical problems.

0127. Ibn Jadarī, mathematician

See: MAMS (III 18).

M1. Treatise on the Science of Arithmetic (Risāla fī ʿilm al-ḥisāb) – Istanbul (SM Beşir 292).

0128. Jaʿfar Asṭurlābī

See: MAMS (III 18).

A1. Diurnal Astrolabe (Asṭurlāb ba rūz) P – Mashhad (Fazil. 31), Najaf (Shushtari), Istanbul (SM AS 187/3, 4878/10).

A2. Spherical Astrolabe (Asṭurlāb-ı kurī) P – Mashhad (Fazil 33), Tehran (Univ. 857/4).

A3. Opened Astrolabe (Asṭurlāb-ı kashfī) P – Mashhad (Fazil. 32/2), Najaf (Shushtari).

0129. Jaʿfar ibn ʿUmar Astarābādī, astronomer from Astrabad

See: STMI (317).

A1. Treatise on the Astrolabe (Risāla-yi asturlāb) P – Aligarh (Azad. Subh. 520/12).

0130. Jagpat Rāy, Indian mathematician

See: STMI (399).

M1. Treatise on Siyaq (Risāla-yi siyāq) P – Hyderabad (riyad. 313)

0131. Sharaf al-Dīn Jamāl

See: MAMS (III 18).
M1. Treatise on Arithmetic (Risāla fi'l-ḥisāb) – Tashkent (8507/9).

0132. Jawāhar Māl, Indian mathematician

See: STMI (400).
M1. Unicums of Arithmetic (Badāi'-i al-ḥisāb) P – Rampur.

0133. Kāfi Qāini, astronomer from Qain

See: MAMS (III 22).
A1. Abridged Commentary on "Almagest" (Tafsīr mukhtaṣar Majisṭī) – Mashhad (1482).

0134. Kamāl al-Tustarī al-Ṣūfi, mathematician from Tustar

See: MAMS (III 22), PL (II 492), STMI (423).
M1. Limit of Desired on Numerical Magic Squares (Ghāyat al-murād fī wafq al-a'dād) P – Aligarh (Azad. Subh. 10), Hyderabad (jadid 2333), Oxford (1558), Tehran (2797/2; Univ. Ilah. 46/2).

0135. Khān Muḥammad ibn 'Abd al-Ghanī Qurayshī Gujaratı, Indian astronomer

See STMI (320).
A1. Gift to Friends on the Science of the Art of Astrolabe (Tuḥfat al-aḥbāb fī 'ilm ṣinā'at al-asṭurlāb) P – Hyderabad (Salar hay'a 31/5, 6).

0136. Khāwarī, mathematician

See: MAMS (III 41).
M1. Arithmetic in Verses (Ḥisab-i manẓūm) P – Tehran (Muza 4830/35).

0137. Al-Khiḍrī, astronomer

See: MAMS (III 44).
A1. Treatise on the Astrolabe (Risālat al-asṭurlāb) – Istanbul (Atıf 1695).

0138. Khiṭāī, astronomer from China

See: MAMS (III 45).
A1. Zīj of Five Planets (Zīj al-kawākib al-khamsa) – Istanbul (NO 2934).

0139. Khudāyār, mathematician, (Khudāyār = "Friend of God" in Persian)

See: MAMS (III 45).
M1. Treatise on the Science of Numbers (Risāla dar 'ilm-i a'dād) P – Tashkent (2908/18). Description of the manuscript: SVR (V 255-256). The mystic mathematical treatise.

0140. Al-Lāmi'ī, astronomer

See: MAMS (III 23), STMI (369).
A1. Solution of [Problems of] the Calendar (Ḥall al-taqwīm) – Hyderabad (jadid 1323), Rome (Vat. Sbath 501/2).

0141. Abū'l-Luṭf al-Ḫiṣnikayfī (al-Ḫiṣkafī) al-Maqdisī, mathematician from Jerusalem

See: GAL² (II 1021), KZ (III 474), MAMS (III 23).

M1. Abridgement of "Means of Arithmetic" (Mukhtaṣar al-Wasīla fi'l-ḥisāb) – Gotha (1492/2). Description of the manuscript: Pertsch [3] (119). Abridgement of the work (No 783, M8) of Ibn al-Hā'im.

M2. Commentary of "Removal of the Veil from Rules of Arithmetic" (Sharḥ Ra'f al-ḥijāb 'an qawā'id al-ḥisāb) – is mentioned in KZ. Commentary on the work (No 980, M4) of Ibn al-Ḫanbalī.

0142. Luṭfallāh Shirāzī, astronomer from Shiraz

See: MAMS (III 23).

A1. Calendar of Lutfallah (Taqwīm-i Luṭfī) P – London (5589).

0143. Ibn Maḥallī al-Mawṣilī, mathematician from Mosul

See: KZ (II 506, V 74, VI 43), MAMS (III 24); Wiedemann [23] (406), [32] (32-35).

M1. [Concise Book on Arithmetic] – is mentioned in KZ (V 74) and by al-Ansari (see Wiedemann [32], 32).

M2. Collection of Principles of Algebra and Almucabala (Jāmi' al-uṣūl fi'l-jabr wa'l-muqābala) – is mentioned in KZ (II 506) and by al-Ansari (see Wiedemann [32] (34).

M3. Useful on Algebra and Almucabala (al-Mufīd fi'l-jabr wa'l-muqābala) – is mentioned in KZ (VI 43) and by al-Ansari (see Wiedemann [32] (34).

0144. Maḥmūd ibn 'Abd al-Raḥmān al-Awfī

See: MAMS (III 24).

A1. [Commentary on Zīj of Ulugh Beg] – Berlin (oct. 3149). Commentary on Zīj (No 816, A1) of Ulugh Beg.

0145. Maḥmūd al-Khayyāt, sheikh and astronomer, descendant of a tailor (khayyāt = tailor)

See: MAMS (III 25).

A1. Book on Celestial Sphere (Kitāb fi'l-falak) – Cairo (mīqāt 93).

0146. Maḥmūd Quṭb al-Miḥnī, Egyptian sheikh and astronomer

See: STMI (359).

A1. Book on the Science of Timekeeping (Kitāb fī 'ilm al-mīqāt) – Ḫyderabad (riyad. 42). Treatise on the conversion of the Arabic calendar to the Coptic calendar.

0147. Maḥmūd ibn al-Wusūdī, mathematician

M1. Core of Arithmetic (Lubāb al-ḥisāb) – Tashkent (2692/1). Research: Badalov [1].

0148. Najm al-Dīn Maḥmūd ibn 'Umar Ṯiyān Abarkūhī, mathematician

See: MAMS (III 25).

M1. Arithmetic of Multiplication and Division (Ḫisāb-i ḍarb wa qismat) P – Tehran (2148).

0149. Al-Majārī, astronomer from Hungary

See: MAMS (III 23).

A1. [Poem on Lunar Stations] – Madrid (341/2).

0150. Majnūn (majnūn =possessed)

See: MAMS (III 23).

M1. Treatise on Drawing a Line (Risālat rasm al-khaṭṭ) – Tashkent (5672/2).

0151. Manṣūr

See: MAMS (III 23).

A1. Treatise on Determining the Azimuth of Qibla (Risāla fī ma`rifat samt al-Qibla) – Tashkent (2422/5).

Description of the manuscript: SVR (V 320-321). Treatise in 5 chapters: 1) Geometric method, 2) Method of Calculation, 3) Method by the Astrolabe, 4) Method by tables, 5) Determining prayer times by tables and reckoning.

0152. Abū Manṣūr al-Nayrīzī, physicist from Nayriz near Shiraz

See: GAL[2] (II 1021), MAMS (III 24).

Ph1. Treatise on Determining the Quantity of Mixed Substances (Risāla fī istiḥrāj kammiyyat al-ajrām al-mukhtaliṭa) – Gotha (1158). German translation: Wiedemann [26] (244-247).

0153. Abū Manṣūr al-Ṭūsī, mathematician from Tus

See: MAA (199), MAMS (III 24); Pingree [44] (Eir).

M1. Treatise on the Science of Arithmetic (Risāla fī `ilm al-ḥisāb) – Florence (317).

0154. Abū Ma`shar Sulṭān, astronomer

See: STMI (286).

A1. Knowledge of Planets during the Day and Night Hours (Fī ma`rifat-i kawākib-i sā`āt al-nahār wa'l-layl) P – Oxford (I 932). Treatise on identifying the night and morning planets.

0155. Mīr Ḥusaynī, mathematician

See: MAMS (III 25).

M1. Treatise on Shadow (Risālat al-ẓill) – Tehran (411/5, 1918/4).

0156. Mīr Abū'l-Qāsim, Indian philosopher

See: STMI (504-505).

Ph1. Correspondence on the Science of Physics (Murāsala dar `ilm-i ṭabī`iyyāt) P – Hyderabad (Salar falsafa 12).

Ph2. Skillful Treatise (al-Risāla al-ṣanā`iyya) P – Hyderabad (Salar falsafa 12).

PH1. Commentary on "Indications" of al-Sheikh al-Raīs (Sharḥ-i Ishārāt li-Sheikh al-Raīs) – Hyderabad (Salar falsafa 12). Commentary on the work (No 317, PH4) of Ibn Sīnā.

0157. Mīr Abū Turāb ibn Aḥmad, mathematician

See: MAMS (III 25).

M1. Treatise on the Knowledge of the Chord of one third of an Arc (Risāla dar ma`rifat-i watar-i thulth-i qaws) P – Tehran (2871/17, Univ. 1751/1).

0158. Muḥammad Hadī ibn Aghā ibn Naqī Lakhnawī, astronomer from Lucknow

See: STMI (326).

A1. Treatise on Determining the Positions of Planets (Risāla-yi istikhrāj-i awḍā `-i kawākib) P – Hyderabad (riyad. 510).

0159. Abū `Abdallāh Muḥammad ibn `Umar ibn Ḥusayn al-Shīrāzī, philosopher from Shiraz

See: STMI (469).
PH1. Commentary on "Sources of Wisdom" (Sharḥ Uyūn al-ḥikma) – Cambridge (Sup. 880). Commentary on the work (No 317, PH8) of Ibn Sīnā.

0160. Qāḍī Ḥasan ibn Qāḍī Muḥammad Makkī al-Faṣiḥī (qāḍī = judge); astronomer from Mecca

See: MAMS (III 22).
A1. Tables of Stars (Jadwalhā-yi nujūm) P – Tehran (Malik 3643).

0161. Mīrqārī Kawkabī Gīlānī, (kawkab = star), astronomer from Gilan

See: MAMS (III 25).
A1. Science of Astrology and Knowledge of the Calendar (`Ilm-i tanjīm wa ma`rifat-i taqwīm) P – Tehran (Univ. 4198).

0162. Muayyad ibn `Abd al-Raḥīm ibn Aḥmad ibn Muḥammad al-Baghdādī, astronomer from Baghdad

See: KZ (III 366), MAMS (III 25).
A1. Treatise on the Astrolabe (Risāla fī'l-asṭurlāb) – is mentioned in KZ.

0163. Mubārak al-Awazī, astronomer

See: KZ (V 432), MAMS (III 25).
A1. Introduction [to Astronomy and Astrology] in Verses (Madkhal-i manẓūm) P – Paris (801, 811, 1871), Tashkent (209/10). Description of the Tashkent manuscript: SVR (V 226-229).

0164. Muḥammad ibn `Abd al-Jalīl, astronomer

See: MAMS (III 26).
A1. Treatise on Astronomy (Risāla fī'l-hay'a) – Istanbul (SM AS 2625).

0165. Muḥammad ibn `Abd al-Wāḥid Tabrīzī, physicist from Tabriz

See: MAMS (III 26).
Ph1. Treatise on Physics (Risāla fī ṭabī`iyyāt) – Tehran (4828/6).

0166. Muḥammad `Ābid ibn Muḥammad Ḍiyā, mathematician

See: MAMS (III 27).
M1. Treatise on the Fraction of the Dinar (Risāla-yi kusūr-i dīnārī) P – St.Petersburg (B 841/5).
M2. Treatise on the Science of Inheritance (Risāla dar `ilm-i waṣāyā) P – St.Petersburg (B 841/2).

0167. Muḥammad `ābidīn ibn Muḥammad Ṭāhir al-Ḥusaynī, mathematician

See: MAMS (III 27).
M1. Problems of Fractions (Masāil kusūr) – Tashkent (6131/8).

0168. Muḥammad Afḍal ibn Mas`ūd al-Ḥusaynī al-Junābādi, astronomer from Gunabad

See: MAMS (III 28).
A1. Treatise on Stars (Risāla dar nujūm) P – Mashhad (Mawlawi 534/1).

0169. Muḥammad ibn Aḥmad al-Dakhrī from Algeria, author of an astrological treatise

See: MAA (203), MAMS (III 29).

0170. Abū'l-`Alā Muḥammad ibn Aḥmad al-Isfaraini, mathematician from Isfarain

See: STMI (387).
M1. Treatise Containing Arithmetic and Algebra and Almucabala (al-Risāla al-mushtamila `alā'l-ḥisāb wa'l-jabr wa'l-muqābala) – Hyderabad (Salar riyad. 14).

0171. Muḥammad ibn Aḥmad al-Ja`farī, astronomer

See: GAL^2 (II 1022), MAMS (III 29).
A1. Science of Astronomy (Ilm al-hay'a) – Beirut (195).

0172. Abū `Abdallāh Muḥammad ibn Aḥmad `Aṭṭār al-Baḥrı, Turkish astronomer

See: HOLA, MAMS (III 29).
A1. Removal of the Veil in the Construction of Quadrants (Kashf al-qinā` fī rasm al-arbā`) – Istanbul (NO 2845).

0173. Muḥammad ibn `Alī, astronomer

See: MAMS (III 27).
A1. Treatise on Miracles of Astronomy (Risālat gharāib al-hay'a) – Warsaw (Bo 2 172).

0174. Abū `Abdallāh Muḥammad ibn `Alī, astronomer

See: MAMS (III 27).
A1. Poem on the Science of Astronomy (Naẓm fī `ilm al-falak) – Kaduna (775/1).

0175. Muḥammad `Alī al-Ḥusaynī, mathematician and astronomer

See: MAMS (III 27).
AM1. Rules of Operations (Qawā`id al-`amal) P – Mashhad (10).

0176. Jalāl al-Dīn Muḥammad ibn `Alī al-Juwaynī, astronomer

See: GAL^2 (II 1022), MAMS (III 27).
A1. Treatise on Operations with the Sine Quadrant without a Pointer (Risāla fī'l-`amal bī'l-rub` al-mujayyab min ghayr murī) – Rome (Vat. Sbath 1249).

0177. Muḥammad ibn `Alī al-Kabādī, mathematician

See: MAMS (III 27).
M1. Treatise of the Explanation of Arithmetic (Risāla dar bayān-i ḥisāb) P – Tashkent (8830/3).

0178. Muḥammad ibn `Alī al-Munajjim Shams

See: STMI (325).
A1. Treatise of Jalal al-Din on the Knowledge of the Northern Astrolabe (al-Risāla al-Jalāliyya fī ma`rifat al-asṭurlāb al-shimālī) P – Rampur (1171).

0179. Muḥammad `Alī ibn Muḥammad Qāsim, mathematician

See: MAMS (III 27).

M1. Mirror of Sulayman (Mir'āt-i Sulaymānī) P – Tehran (Univ. 3609, 3822/1).

0180. Muḥammad ibn 'Alī al-Mūsawī, astronomer

See: STMI (325).
A1. Treatise on the Knowledge of Astrolabe (Risāla dar ma'rifat-i asṭurlāb) P – London (Sup. 2325).

0181. Abū 'Abdallāh Muḥammad ibn 'Alī al-Sanhājī, astronomer

See: MAMS (III 28).
A1. [Treatise] of al-Sanhājī (al-Sanhājiyya) – Algiers (1464).

0182. Muḥammad Amīn ibn 'Abdallāh, mathematician

See: MAMS (III 28).
M1. [Treatise on Multiplication] P – St.Petersburg (Nat. PNS 315/5).

0183. Zayn al-Dīn Abū'l-'Abdallāh Muḥammad ibn 'Amr al-Tanūkhī al-Ma'arrī, mathematician

See: MAMS (III 28).
M1. Book on Algebra and Almucabala (Kitāb fī'l-jabr wa'l-muqābala) – Rome (Vat. 317). Research: Saliba [1].

0184. Muḥammad al-'Amrī al-Milānī, mathematician

See: MAMS (III 28).
M1. Sufficient on Arithmetic (al-Kāfī fī'l-ḥisāb) – St.Petersburg (Univ. 90/8).

0185. Muḥammad al-'Arabī, astronomer

See: MAMS (III 28).
A1. Treatise on the Astrolabe (Risāla fī'l-asṭurlāb) – Rabat (2540).

0186. Abū 'Abdallāh Muḥammad ibn al-'Arabī ibn 'Abd al-Raḥman Mufarrigh al-Shafshawānī al-Andalusī, astronomer from Andalusia

See: GAL² (II 709), MAMS (III 28).
A1. Treatise on Operations with the Instrument Astrolabe and Calculations (Risāla fī'l-'amal bi ālat al-asṭurlāb wa'l-ḥisāb) – Rabat (447).

0187. Abū Isḥāq Ghiyāth al-Dīn Muḥammad 'Ashiqī Kirmānı, mathematician from Kirman

See: MAMS (III 29).
M1. Treatise on Arithmetic (Risāla dar hisāb) P – Mashhad (Ja'far), Tehran (85/9).
M2. Treatise on Siyaq (Risāla dar siyāq) P – Mashhad (7148), Tehran (3117/1, Univ. 1828).

0188. Muḥammad 'Aṭif ibn 'Abd al-Raḥman al-Qabūjāqı, mathematician of Qipjaq origin

See: GAL² (II 1022), MAMS (III 28).
M1. Treatise on Introduction to the Science of Geometry (Risālat al-madkhal fi 'ilm al-handasa) – Princeton (Garr. 1061).

0189. Muḥammad ibn Abī Bakr ibn al-Muṣṭafā al-Qādirī al-Sukufī, astronomer

See: MAMS (III 29).
A1. Poem on the Science of Astronomy (Naẓm 'ilm al-falak) – Kaduna (1016).

0190. Muḥammad Dahdār

See: MAMS (III 30).
A1. Fixed Stars (al-Kawākib al-thawābit) – Mashhad (5377).

0191. Rāḍī al-Dīn Muḥammad al-Ghaznawi astronomer from Ghazna

See: MAMS (III 30).
A1. Treatise on Determining Timekeping (Risāla fī istikhrāj al-mīqāt) P – Istanbul (NO 2919).

0192. Muḥammad Ḥabīballāh Qandahāri, mathematician from Qandahar

See: STMI (407).
M1. Garden of Geometers (Rawḍat al-muhandisīn) – Hyderabad (riyad. 408)

0193. Zayn al-Millat wa'l-Dīn Muḥammad Hamadānī, astronomer from Hamadan

See: MAMS (III 34).
A1. Friend of Students in the Knowledge of the Astrolabe (Anīs al-ṭullāb fī ma`rifat al-asṭurlāb) – Tehran (Malik 3382/1; Univ. Ilah. 99/3).

0194. Muḥammad ibn Ḥasan Shirwānī Iṣfahānī;mirza, mathematician from Isfahan

See: MAMS (III 34).
M1. Geometry (Handasa) – Qumm (Fayz. 1008/5), Yerevan (494).

0195. Muḥammad ibn Ibrāhīm ibn `Alī, astronomer

See: MAMS (III 30).
A1. Science of Astronomy and the Sine Quadrant (`Ilm al-hay'a wa'l-rub` al-mujayyab) T – Baku (B 396/1).

0196. Muḥammad ibn Ibrāhīm ibn Razīn, astronomer

See: GAL[2] (II 1023), MAMS (III 30).
A1. [Treatise on Quadrants] – Dresden (23/8)

0197. Muḥammad ibn Ismā`Il al-Tanūkhī, astronomer, travelled in India

See: MAA (196-197), MAMS (III 30).

0198. Muḥammad Ja`far Ṯabisī, astronomer from Tabes

See: MAMS (III 30).
A1. Concise [Book] on the Science of Astronomy of Higher and Lower Bodies (Mukhtaṣarī dar `ilm-i hay'at-i ajrām-i `ulwī wa suflī) P – Rasht (Maj. 71/10).

0199. Badr al-Dīn Muḥammad ibn al-Khaṭīb, mathematician

See: KZ (III 202), MAMS (III 35).
M1. Pearl of Crown on Sciences of Arithmetic (al-Durra al-tājiyya fi'l-`ulūm al-ḥisābiyya) – is mentioned in KZ. Book in 4 chapters plus introduction.

0200. Muḥammad Jaramī, astronomer

See: STMI (327)

A1. Sealed Treatise on the Knowledge of the Form of the World (Risālat faṣṣ al-khatam fī ma`rifat hay'at al-`ālam) P – Hyderabad (riyad. 709), Oxford (1545/3).

0201. Muḥammad Mahdī ibn Muḥammad Riḍā, mathematician

See: MAMS (III 31).
M1. Treatise on Siyaq (Risāla dar siyāq) P – Tehran (5387/2; Danishsaray 622/5; Malik 4719/38).

0202. Muḥammad Ma`sūm ibn Mawlanā Bābā al-Samarkandī al-Balkhī, astronomer from Samarkand

See: STMI (327).
A1. Commentary on "Compendium on Astronomy" (Sharḥ al-Mulakhkhaṣ fī'l-hay'a) – Aligarh (Azad `Abd al-Ḥayy 624/1). Commentary on the treatise (No 547, A1) of al-Jaghmīnī.

0203. Muḥammad ibn Muḥammad, mathematician

See: MAMS (III 31).
M1. Decorated Gift (al-Tuḥfa al-zawqiyya) – Baku (A 386).

0204. Muḥammad ibn Muḥammad ibn Muḥammad ibn Bahādur al-Mawlawī al-Shāfi`ī, astronomer

See: MAMS (III 32).
A1. Delight in Operations with the Perfect Quadrant (Nuzhat al-`āmil fī'l-`amal bi'l-rub` al-kāmil) – Cairo (mīqāt 1050).

0205. Muḥammad ibn Muḥammad ibn Muḥammad ibn `Īsā ibn Aḥmad al-Muwāsī al-Fāsī, astronomer from Fas

See: MAMS (III 32).
A1. Treasure of Mysteries on the "Garden in Full Bloom" (Kanz al-asrār fī Rawḍat al-azhār) – Rabat (2507). Commentary on the work (No 790, A1) of al-Jadarī.

0206. Muḥammad ibn Muḥammad al-Sharnakāshī, mathematician

See: MAMS (III 33).
M1. Majestic Pearls and Arithmetic Achievements in Determining Proportional Parts and others and in Operations with Sexagesimal Tables (al-Durar al-saniyya wa'l-natīja al-ḥisābiyya fī ikhrā11j al-ḥiṣaṣ wa ghayrihā wa'l-a`māl bi'l-jadāwil al-sittīniyya) – Berlin (IGME II 1). Description of the manuscript: Ruska and Hartner [1] (171-173)

0207. Muḥammad ibn Muḥammad al-Tabādakānī, judge and astronomer

See: MAMS (III 32).
A1. Approximate Approach in Explanation of [the Movement] of Planets (Tasnīm al-muqarribīn fī sharḥ al-sā'irīn) – Tashkent (7255).

0208. Muḥammad ibn Muḥammad ibn `Umar Bahrām al-Ḥaḍramī, mathematician from Hadramawt

See: MAMS (III 32).
M1. Gift for Students on Commenting on the Core of Elements of Arithmetic (Tuḥfat al-ṭullāb fī sharḥ al-lubāb fī uṣūl al-ḥisāb) – Baghdad (2932).

0209. Zayn al-Dīn Abū `Abdallāh Muḥammad ibn Muḥammad ibn `Umar al-Fanūkhī, mathematician from Maghrib

See: MAA (198), MAMS (III 32).
M1. [Book on Cubic Equations or on Solution of Corporal Problems] – Rome (Vat. 317/2).
M2. [Book on Removal of the Veil from Definition and Finding the Straightness of Lines] – Rome (Vat. 317/3).

0210. Abū `Amr (Abū `Abdallāh) Muḥammad ibn Abī'l-Qāsim al-Andalusi, from Andalusia

See: MAA (200), KZ (II 78-79), MAMS (III 31).
A1. Explanation of Constellations in Respect to the Year, Months, and Lunar Stations (Bayān al-ṣuwar min sanat wa shuhūr wa manāzil al-qamar) = Explanation of Constellations – Introduction to Timekeeping (Bayān al-ṣuwar – muqaddima fi'l-mīqāt) = Explanation of Quantitative [Relations] between the Year, Months, and Lunar Stations (Bayān al-qadr bayna sanat wa shuhūr wa manāzil al-qamar) – Berlin (5714); the second and third titles are mentioned in KZ as two treatises in 20 chapters.

0211. Muḥammad ibn Qāsim ibn Mūsā al-`Aydalī, astronomer

See: MAMS (III 30).
A1. Treatise on Testing Instruments, Circles, and Lines in Astrolabe (Risāla fī imtiḥān al-ālāt wa'l-dawāir wa'l-khuṭūṭ fi'l-asṭurlāb) – Baghdas (Islam. 20).

0212. Fakhr al-Dīn Abū `Abdallāh Muḥammad ibn Abī'l-Qāsim ibn Taymiyya al-Ḥarrānī al-Ḥanbalī, mathematician from Harran, Turkey

See: GAL[2] (II 1024), MAMS (III 31).
M1. Guide to Possessing Minds in the Science of Arithmetic (al-Murshid li-dhawī al-albāb fī `ilm al-ḥisāb) – Gotha (71/1).

0213. Muḥammad ibn al- Najighī al-Ḥijāzī, astronomer from Saudi Arabia

See: MAMS (III 33).
A1. Treatise on the Astrolabe (Risāla dar asṭurlāb) P – Tashkent (3780/4).

0214. Muḥammad Riḍā ibn `Ināyatallāh, astronomer

See: STMI (328).
A1. Treatise on Knowledge of the Calendar (Risāla dar ma`rifat-i taqwīm) P – Rampur (1219).

0215. Muḥammad ibn Riḍā al-Kāẓim Ṭabarī, mathematician and astronomer

See: MAMS (III 33).
M1. Collections of Science (Jawāmi` al-`ilm) P – Tehran (Univ. 822).
A1. Sections of al-Ṭabarī (Fuṣūl-i Ṭabarī) P – Berlin (8066/7), Tehran (Malik 3317/1).

0216. Muḥammad Riḍā ibn Muḥammad Hāshim Yazdī, astronomer from Yazd

See: MAMS (III 33).
A1. Times at Night and Day (Awqāt-i shab u rūz) P – Tabriz (Milli 3210).

0217. Muḥammad Sa`īd ibn Aḍud al-Dīn `Abd al-Laṭīf Qandahari, mathematician from Qandahar

See: STMI (408).
M1. Commentary on "Exposition of Euclid" (Sharḥ Taḥrīr Uqlīdis) – Hyderabad (riyad. 352 – incomplete). Commentary on the work (No 606, M1) of al-Ṭūsī.

0218. Muḥammad Sa`īd ibn Muḥammad Walī, mathematician

See: STMI (408).
M1. Lock to Difficulties (Qalīd al-mushkilāt) P – Hyderabad (riyad. 536).

0219. Muḥammad Sa`īd al-Dīn, mathematician

See: STMI (408).
M1. Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb) – Lucknow (6). Commentary on the work (No 1058, M1) of al-`Āmilī.

0220. Muḥammad Ṣāliḥ al-Husaynī, astronomer

See: MAMS (III 34).
A1. Gift on the Knowledge of Years and Days (al-Tuḥfa fī ma`rifat al-sinīn wa'l-ayām) – Jerusalem (Khalid. 13).

0221. Muḥammad Saqqār, astronomer

See: STMI (328).
A1. Knowledge of the Calendar (Ma`rifat-i taqwīm) P – Hyderabad (Salar hay'a 28).

0222. Muḥammad Sāfī ibn `Awwād, astronomer

See: MAMS (III 34).
A1. Treatise on Knowledge of the Azimuth of Qibla (Risāla-yi ma`rifat-i samt-i Qibla) P – Tashkent (3852/1).

0223. Muḥammad Sirāj, astronomer

See: STMI (333).
A1. Concise [Book] on Knowledge of the Calendar (Mukhtaṣar dar ma`rifat-i taqwīm) – London (Ind. 2250).

0224. Muḥammad ibn Sulaymān al-Maghribī, astronomer from Maghrib

See: MAMS (III 34), STMI (294).
A1. Treatise on Drawing the Astrolabe (Risāla fī rasm al-asṭurlāb) – Princeton (Garr. 1013). Description of the manuscript: Hitti, Faris, and Abd al-Malik [1] (319).
A1a. Treatise on the Construction of the Astrolabe by Geometry (Risāla fī waḍ` al-asṭurlāb bi'l-handasa) – Hyderabad (riyad. 9).
A2. Treatise on Construction of the Quadrant (Risāla fī waḍ` al-'l-rub`) – Istanbul (NO 2921).
A3. Treatise on Timekeeping and the Azimuth of Qibla (Risālat mīqāt wa samt al-Qibla) – Istanbul (NO 2922).
AG1. First Aims of "Necklace of Brilliance" (Maqāṣid al-awālī bi-Qalā'id al-La'ālī) – Hyderabad (riyad. 3).

0225. Muḥamad al-Ṭarābulusī, astronomer from Tripoli

See: MAMS (III 34).
A1. Treatise on the Astrolabe (Risāla-yi asṭurlāb) P – Yerevan (804/1).

0226. `Uruḍ al-Dīn al-Naqīb, astronomer

See: STMI (372).
A1. Treatise on the Sine Quadrant (Risāla fī'l-rub` al-mujayyab) – Hyderabad (maj. 11/15).

0227. Nuwwāb Shams al-Umarā Muḥammad Fakhr al-Dīn, Indian mathematician

See: MAMS (III 34).

M1. The Sun of Geometry (Shams al-handasa) – Hyderabad (riyad. 19, 119).

0228. Muḥammad al-Hafafī, astronomer

See: MAMS (III 35).
A1. Commentary on "Memoir" (Sharḥ al-Tadhkira) – Kazan (1089). Commentary on the work (No 606, A10) of al-Ṭūsī.

0229. Muḥammad ibn Khwāja, mathematician

See: MAMS (III 35).
M1. Treatise on Arithmetic (Risāla fi'l-ḥisāb) – Tashkent (6175/3).

0230. Muḥammad Ḥusayn ibn Qāsim Harawı, astronomer from Heart

See: MAMS (III 35).
A1. Thirty Sections (Sī faṣl) P – Tehran (Malik 3207/4).

0231. Muḥammad Ḥusayn ibn Muḥammad Bāqī, astronomer

See: MAMS (III 35).
A1. Treatise on the Astrolabe (Risāla dar asṭurlāb) P – Tashkent (3780/3).

0232. Muḥammad Ḥusayn Ṣabūrī Tabrīzī, astronomer from Tabriz

See: MAMS (III 35).
A1. Treatise on the Calendar (Risāla dar taqwīm) P – Tehran (Univ. 4112, 4786/1).

0233. Muḥammad al-Ḥusaynī "Sayyid Munajjim", astronomer and astrologer

See: MAMS (III 35).
A1. Means (Wasīla) = Commentary on "Concise Knowledge of the Calendar" (Sharḥ-i mukhtaṣar dar ma`rifat-i taqwīm) – St.Petersburg (A 265/7). Commentary on the work (No 915, A1) of al-Ruyanī.

0234. Muḥammad Ḥusaynī, mathematician

See: MAMS (III 35).
M1. Guideto Arithmetic according to the "Essence of Arithmetic" (Hidāyat al-ḥisāb ilā Khulāṣat al-ḥisāb) – Mashhad (Gawharshad 1764). Revision of the work (No 1058, M1) of al-`Āmilī.

0235. Muḥammad Shākir ibn Ḥammād Qāzānī, physicist from Kazan

See: MAMS (III 36).
Me1. Treatise on the Investigation of Movement (Risāla fī taḥqīq al-ḥaraka) – Baku (B 322/1).

0236. Muḥammad Shams al-Dīn ibn Muḥammadal-Khwānakī, mathematician

See: MAMS (III 36).
M1. Abridgement of a Treatise on Important Uses on the Knowledge of what is Obtained from the Sine by Multiplication and Division (Mukhtaṣar Risālat al-fawā'id al-muhimma fī ma`rifat mā yuḥtāju min al-jayb bi'l-ḍarb wa'l-qisma) – Cairo (mīqāt 185).

0237. Muḥammad Yūsuf, astronomer

See: MAMS (III 30).
A1. Knowledge of the Noon and Qibla (Ma`rifat al-zawāl wa'l-Qibla) – Mashhad (Gawharshad 427).

0238. Muḥsin Bāz Muḥammad Ṭāhir, mathematician

See: MAMS (III 36).
M1. Preparation for Arithmetic (Rashḥ al-ḥisāb) – Mashhad (7125).

0239. Muḥyī al-Dīn ibn Aḥmad al-Māliḥī, astronomer

See: MAMS (III 36).
A1. Treatise on Gardens in Full Bloom on Operations with the Mucantar Quadrant (Risālat al-rawḍāt al-muzhirāt fī'l-`amal bi rub` al-muqanṭarat) – Istanbul (SM Laleli 2724/1, 3)
A2. Treatise on Operations with the Sine Quadrant (Risāla fī'l-`amal bi'l-rub` al-mujayyab) – Istanbul (SM Laleli 2724/2).

0240. Muḥyī al-Dīn ibn Ḥusayn ibn `Alī al-Ḥaḍramī, mathematician from Hadramawt

See: MAMS (III 36).
M1. Table of a Fourth Hundred after a Thousand (Jadwal al-mi'a al-rābi'a ba'd al-alf) – Tarim (al-Kaf 79/7).

0241. Ibn Muqaddam, mathematician

See: MAMS (III 26).
M1. [Commentary on Treatise on Triangles] – Manchester (352/B).

0242. Sharaf al-Dīn Mūsā al-Buldānī

See: GAL² (II 1024), MAMS (III 26).
M1. Sufficient for the Clever on the Knowledge of Synthesis (Muqni` al-labīb fī ma`rifat al-tarākīb) – Paris (1176/23).

0243. Abū'l-Qāsim al-Muẓaffar ibn `Alī ibn al-Muẓaffar "Ibn Abī Ṭāhir", astronomer

See: MAA (198), MAMS (III 25).
A1. Concise [Book] on Conjunctions (Mukhtaṣar fī'l-qirānāt) – London (426/9). The manuscript was written in 1242.

0244. Muẓaffar ibn Muḥammad Fārisī Ikhtiyār, astronomer from Fars

See: MAMS (III 25).
A1. Indication to Astrologers (Tanbīh al-Munajjimīn) P – Baku (D 231).

0245. Nadī, mathematician

See: MAMS (III 36).
M1. Concise [Book] on Arithmetic of Multiplication and Division (Mukhtaṣar fī ḥisāb al-ḍarb al-qismānī) – Konya (733).

0246. Naṣīr al-Dīn ibn `Īsā al-Ḥaṣkafī, astronomer

See: GAL² (I 869), MAMS (III 36).
A1. Marvellous Rules (al-Dastūr al-`ajīb) – Paris (2540/2).
Astronomical tables.

0247. Naẓar `Alī, astronomer

See: MAMS (III 36).
A1. Astrolabe (Asṭurlāb) – Tehran (Sipahsalar 8310/11).

0248. Nūr al-Dīn ibn Sirāj al-Dīn, astronomer

See: MAMS (III 37), STMI (341).

A1. Treatise on Knowledge of the Construction of Sine Quadrants of Horizons (Risāla dar ma`rifat-i a`māl-i rub` mujayyab-ı āfāq) P – Patna (1649). Description of the manuscript: Abd al-Muqtadir [3] (120-121). Book in 17 chapters.

0249. Nūr al-Dīn al-Wāsiṭī, astronomer from Wasit

See: MAMS (III 37).

A1. Poem on Stars (Urjūza fi'l-nujūm) – Istanbul (TK 3430).

0250. Nūrallāh ibn Muḥammad Ḥusaynī Shushtarı, astronomer from Shushtar

See: MAMS (III 37), STMI (342).

A1. Treatise on the Knowledge of Astrolabe (Risāla dar ma`rifai-i asṭurlāb) P – Patna (1059-1060). Treatise on reckoning time and horoscopes, distances and sizes of planets.

0251. Qiwām al-Dīn Qazwīnī, mathematician from Qazwin

See: MAMS (III 23).

M1. Poem on Arithmetic (Naẓm al-ḥisāb) – Mashhad (6569).

0252. Rafī al-Dīn Dihlawī, astronomer from Delhi

See: STMI (348).

A1. Treatise on the Exposition of Equation (Risāla fi'l-mujtamal al-ta`dīl) – Hyderabad (Osm. 489).

0253. Rukn al-Dīn Gurgānī, astronomer from Jurjan

See: MAMS (III 37).

A1. Commentary on Arabic Translation of "Sections" of Khwaja al-Ṭūsī (Sharḥ tarjama `arabiyya li Fuṣūl Khawāja al-Ṭūsī) – Tehran (Univ. 1717). Commentary on the work (No 606, A16) of al-Ṭūsī.

0254. Sa`d Ḥamza ibn `Alī Shākir Naysābūrī, mathematician from Nishapur

See: MAMS (III 38).

M1. Treatise on Algebra and the [Rule of] Two Errors (Risāla fi'l-jabr wa'l-khaṭa'ayn) – Tehran (Univ. 2622/2).

0255. Sa`īd `Alī Hamadānī, mathematician from Hamadan

See: MAMS (III 38).

M1. [Arithmetic Problems] P – Vienna (Acad. 325).

0256. Sa`īd ibn Ibrāhīm, astronomer

See: MAMS (III 38).

A1. Treatise on the Shape of the Earth and Figures of Celestial Bodies and of the Causes of Solar and Lunar Eclipses (Risāla fi hay'at al-arḍ wa ashkāl ajrām al-samāwāt wa fi kayfiyyat al-kusūf wa'l-khusūf) – St.Petersburg (D 624).

0257. Sa`īd Manṣūr, mathematician

See: MAMS (III 38).

M1. Core of Arithmetic (Lubāb al-ḥisāb) – Mashhad (8641).

0258. Sarup Singh, Indian mathematician

See: STMI (418).
M1. Treatise on Arithmetic (Risāla dar ḥisāb) P – Rampur.

0259. Sayyid Aḥmad ibn al-Sayyid `Abd al-Jabbār ibn Sayyid Ibrāhīm ibn Sayyid Hāshim "Qāḍī al-Baṣrī", judge and astronomer from Basra

See: MAMS (III 38).
A1. Key to Mysteries (Miftāḥ al-asrār) – Tashkent (2934/1). Description of the manuscript: SVR (V 320). Introduction to astrology.

0260. Sayyid `Alī, mathematician

See: STMI (419).
M1. Key of Arithmetic (Miftāḥ al-ḥisāb) – Hyderabad (jadid 270).

0261. Sayyid Iṣfahānī, mathematician from Isfahan

See: MAMS (III 39).
M1. Use in Geometry (Fā'ida dar handasa) P – Hyderabad (568/2).

0262. Al-Ṣāliḥ Aḥmad ibn Mūsā al-Ḥāmili, astronomer

See: MAMS (III 39), STMI (321).
A1. Perfect Explanation on the Knowledge of [Lunar] Stations and Times (al-Īḍā ḥ al-Shafī` bi'l-ittiqān fī ma`rifat al-manāzil wa'l-azmān) – Jakarta (Sup. 618), London (Sup. 773/4).

0263. Shihāb al-Dīn ibn Muḥammad ibn Ibrāhim al-Ash`arī, mathematician

See: STMI (422).
M1. Book on the Science of Measurement (Kitāb al-tuffāḥa fī `ilm al-misāḥa) – Hyderabad (riyad. 177).

0264. Abū Sulaymān al-Baḥrī, Turkish astronomer

See: STMI (290).
A1. Book Stating that Celestial Bodies have Souls (Maqāla fī anna al-ajrām al-`ulwiyya dhawāt nufūs) – Hyderabad (Osm. 1409).

0265. Sha`bān ibn Ḥusayn, astronomer from Kastamonu, Turkey

See: MAMS (III 46), OM (III 276).
A1. Treatise on the Celestial Equator and its Instrument (Risāla fī mu`addil al-nahār wa'l-`amal bi-ālatihī) – is mentioned in OM.

0266. Shāh Fattāḥ ibn Sa`dallāh al-Ḥusaynī, astronomer

See: MAMS (III 47).
A1. [Collection of Astronomical Treatises] P – London (7344).

0267. Abū'l-Ghanā'im (Abū'l-Ḥasan) Shākir ibn Khalīl, astronomer

See: GAL[2] (I 864), MAA (195), MAMS (III 46).
A1. Perfect [Book] on the Art of Stars (Kāmil al-ṣinā`a al-nujumiyya) – Munich (872). The manuscript was written in 1162.

0268. Shams al-`Ulamā Jurjānī, astronomer from Gurgan

See: MAMS (III 47).
A1. Key to "Twenty Chapters on the Astrolabe" (Miftāḥ-I Bīst bāb-ı asṭurlāb) P – Mashhad (5408).

0269. Ibn Shar`a, astronomer

See: KZ (V 407, 654), MAMS (III 47).
A1. Sufficient on Stars (al-Mughnī fi'l-nujūm) – is mantioned in KZ (V 654).
A2. Collection of Prescriptions of Stars (al-Majmū` fī aḥkām al-nujūm) – is mentioned in KZ (V 407).

0270. al-Sharaf al-`Umar al-Ṭaī

See: STMI (360).
M1. Collection (al-Majma`) – London (420/3).

0271. Sharaf al-Dīn al-Ḥabashī, mathematician from Ethiopia

See: MAMS (III 47).
M1. Guide for the Knowledge of Sevenfold Numbers (al-Irshād fī ma`rifat subā`iyāt al-a`dād) – Tarim (al-Kaf 36).

0272. al-Sharīf Aḥmad ibn Muḥammad al-Mahdī, astronomer

See: MAMS (III 47).
A1. Treatise on Stars (Risāla fi'l-nujūm) – Kazimiya (Mahfuz 158/2).

0273. Shihāb al-Dīn al-Shāfi`ī, astronomer

See: MAMS (III47).
A1. Treatise on the Sine Quadrant (Risāla fi'l-rub` al-mujayyab) – Tripoli (Um. 1101/7).

0274. Ṭāhir al-Ḥusaynī, mathematician

See: MAMS (III 39), STMI (354) .
M1. Explanation of the Science of Projection onto a Plane (Tashrīḥ fī `ilm al-tasṭīḥ) P – Aligarh (Azad. Subh. 520/5).

0275. Tāj [al-Dīn] al-Lārī, mathematician from Lar

See: MAMS (III 39).
M1. Compendium of Arithmetic (Mulakhkhaṣ al-ḥisāb) – Kazan (1200).

0276. `Umar `Abd al-`Azīz, mathematician

See: MAMS (III 39).
M1. Jalalian Rules of Arithmetic (Dastūr-i ḥisāb-i Jalālī) P – Cairo (Tal`at 140/1), Tehran (2974).

0277. `Umar ibn Aḥmad al-Ḥaqq, mathematician

See: MAMS (III 39).
M1. Notable Treatise on Arithmetic (al-Risāla al-bahā'iyya fi'l-ḥisāb) – Mosul (Hajiyat 172).

0278. Abū'l-Fatḥ `Umar ibn Muḥarrar Yūsuf, astronomer

See: MAMS (III 40).
A1. Introduction [to the Science] of Stars (Tabṣīr fi'l-nujūm) – Baku (B 2141/4).

0279. Shams al-Dīn Abū'l-Mafākhir `Umar ibn al-Muẓaffar ibn Rūzbihān, astronomer

See: GAL[2] (II 1024), MAMS (III 39).
A1. Treatise on the Science of Signs of Planets (Risāla fī `ilm awsām al-nujūm) – Berlin (oct. 1024/1).
A2. Science on Limits of the World (`Ilm ḥudūd al-`ālam) – Berlin (oct. 1024/2).
A3. Knowledge of the Astrolabe (Ma`rifat al-asṭurlāb) – Berlin (oct. 1024/3).

0280. Afḍal al-Dīn `Umar ibn `Unlāq, mathematician

See: MAMS (III 40).
M1. Proofs of Operations of [the Rule] of Two Errors (Barāhīn `amal al-khaṭa'ayn) – Tashkent (3291/2). Description of the manuscript: Matviyevskaya [5] (158).

0281. Osman Efendi, Turkish astronomer

See: MAMS (III 40).
A1. Treatise on the Globe (Risālat al-kura) – Istanbul (SM Yahya 245).

0282. Yaḥyā ibn Ḥusayn, mathematician

See: STMI (425).
M1. Selections on the Science of Measurement (Nubdha fī `ilm al-misāḥa) – Hyderabad (riyad. 178).

0283. Ya`qūb ibn Shams al-Dīn Muḥammad ibn `Izz al-Dīn `Alī `Abd al-Razzāq al-Ṭāwūsī, mathematician

See: MAMS (III 21), PL (II 492), STMI (426).
M1. Treatise on Numbers of Magic Square (Risāla dar `ilm-i a`dād-i wafq) P – Tehran (Univ. 2475, 3051).
M2. Essence of Desired on Numbers of Magic Square (Kunh al-murād fī wafq al-a`dād) P – Oxford (1562), Paris (900). Treatise in 3 chapters plus conclusion.

0284. Yaqūt ibn `Uthmān al-Jakhabī, mathematician

See: MAMS (III 21).
M1. Treatise on Arithmetic and Inheritance (Risāla fī'l-ḥisāb wa'l-farāiḍ) – Tashkent (8044/5).

0285. Yūsuf ibn Muṣṭafā, mathematician

See: MAMS (III 22).
M1. Mysteries in the Science of Arithmetic (al-Asrār fī `ilm al-ḥisāb) T – Budapest (0206).

0286. Yūsuf al-Tahwāī, astronomer

See: GAL[2] (II 1025), MAMS (III 22).
A1. Mysteries of Circles of Rotations of Lights (al-Asrār fī dawāir dārāt al-anwār) – Leiden (952/2).

0287. Ẓāhir Aḥmān, astronomer

See: MAMS (III 19).
A1. Treatise on Discussion of Treatise on Rules in Using the Instruments of Astrolabe (Risāla-yi baḥth dar risāla-yi qawā`id al-musta`malāt bi-ālāt al-asṭurlāb) P – Mashhad (87).

0288. Zayn al-`ābidīn ibn Muḥammad, astronomer

See: MAMS (III 18).
M1. Book on Elements of Geometry and Arithmetic (Kitāb uṣūl al-handasa wa'l-ḥisāb) T – Budapest (0222/2). Revision of Euclid's "Elements".

ANONYMOUS WORKS IN WORLD LIBRARIES

AFGHANISTAN

Kabul Ettalaat

28	Commentary on "Book on the Science of Astronomy (Sharḥ kitāb fī 'ilm al-hay'a).
87	Treatise of [Commentary on] Euclid (Risāla-yi Uqlīdis) P.
88	[Astronomical treatise].

ALGERIA

Algiers Museum

1446/4	Reasoning on Figure of Secants (al-Qawl fī'l-shakl al-qaṭṭā').
1446/10	[Treatise on Astronomy].
1455	[Commentary on Zīj of Ulugh Beg]. Commentary on the zīj (No 816, A1) of Ulugh Beg.
1457/1	Delight of Students in Timekeeping by Reckoning (Nuzhat al-ṭullāb fī ma'rifat al-awqāt bi'l-ḥisāb).
1460/2	Pole of Brilliant [Stars] in Operations with the Almucantar Quadrant (Quṭb al-ẓāhirāt fī'l-'amal bi-rub' al-muqanṭarāt).
1467/2	Guide for Perplexed for Knowledge of Position of Surplus of Turn (Hidāyat al-ḥāir ilā ma'rifat waḍ ' faḍl al-dāir) = Cairo (V 310/2).

AUSTRIA

Vienna National Library

328	Geometric Treatise (Risāla handasiyya). Description of the manuscript: Krafft [1] (5). Treatise in 7 chapters: 1) on triqueter, 2) on diopter, 3) on triangular instrument, 4) on quadrant, 5) on mirror, 6) on astrolabe, 7) on determining distances.
338	Treatise on Operations with the Astrolabe (Risāla fī'l-'amal bi'l-asṭurlāb).
340	[Treatise on the astrolabe].
341	Table of Ascensions of Zodiacal Signs (Jadwal maṭāli' al-burūj) Treatise for Fas.
342	Table of Ascensions in the Right Sphere (Jadwal maṭāli' al-falak al-mustaqīm).
344	Commentary on "Aim of Students" (Sharḥ Bughyat al-ṭullāb). Commentary on the work (No 831, A1) of Ibn al-Ḫabbāk.
351	Opening of Mysteries (Kashf al-asrār) T. Astronomical and astrological treatise.
354	Explanation of the Almanac for Solar Months (Sharḥ-i rūz-namā-yi shuhūr-i sham-siyya) T.
1135	Commentary on the "Solution of Essence" (Sharḥ Ḫall al-Khulāṣa). Super-commentary on commentary (No 1155, M1) by al-Jazā'irī on the work (No 1058, M1) of al-'Āmilī.
1209/16	Treatise on the Construction of Astrolabe (Risāla fī a'māl al-asṭurlāb).
1364/2	Essential Explanation on the Construction of Astrolabe (Nukhbat al-lubāb bi-sharḥ 'amal al-asṭurlāb).
1507/4	Introduction to the Science of Algebra and Almucabala (Muqaddima fī 'ilm al-jabr wa'l-muqābala).
1507/6	[On the Sine Quadrant]

Vienna Academy

326	Treatise on the Science of Arithmetic and Style (Risāla fī 'ilm al-ḥisāb wa'l-qalam) T.
348	Treatise on the Quadrant of a Circle (Risāla-yi rub'-i dāira) P.

AZERBAIJAN

Baku Institute of Manuscripts

A 55/1	Knowledge of the Altitude (Ma`rifat-i irtifā`) P.
A 197	Book on Arithmetic (Kitāb dar ḥisāb) P.
A 259/1	Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb). Commentary on the work (No 1058, M1) of al-`'Amili.
A 366/1, 386/9	[Geometric treatises] P.
A 366/6	The Astrolabe (Asṭurlāb) P.
A 366/9	Science of Stars (`Ilm-i nujūm) P.
A 370	[Treatise on arithmetic and geometry].
A 413	Science of Celestial Spheres (`Ilm-i aflāk) P.
A 423/1	Commentary on "Introduction" (Sharḥ-i Madkhal) P. Commentary on the work A 423/2.
A 432/2	Introduction (Madkhal) P.
A 496/4	Treatise on all Existing in Heaven (Risāla-yi kāinat-i jaww) P.
A 739/1	Concise Arithmetic (Mukhtaṣar al-ḥisāb).
A 850/4, B 1828, 2864	[Astronomical treatises].
A 963, B 381/2, 1996/7, 2166/2, 2315/10, 2811/1, 2837/5, 3262/3, 3950, 4129, 4147/3, 4306/5	Northern Astrolabe (al-Asṭurlāb al-shimālī).
A 1061	Literal Arithmetic (Ḥisāb-i ḥurūf) P.
B 16/7, M 15/6	Treatise on the Science of Arithmetic (Risāla fī `ilm al-ḥisāb) P.
B 337/3	Commentary on "Concise [Treatise] of Naṣīr al-Dīn al-Ṭūsī (Sharḥ al-Mukhtaṣar li-Naṣīr al-Dīn al-Ṭūsī). Commentary on the work (No 606, A17) of al-Ṭūsī.
B 488/1-3, 4403/4	Algebra and Almucabala and Science of the Unknown [Quantities] (Jabr u muqābala u `ilm-i majhūlāt) P.
B 511	Discussion on the Qibla (Mabāḥith Qibla).
B 600/2, 748/2, 1147, 3098	[Geometric treatises] P.
B 675/5, 5545/5	Science of Arithmetic (`Ilm al-ḥisāb).
B 1459/2, 2315/12	Commentary on (No 899a, A1). Commentary on the work (No 921, A1) of Fanārī-zāda.
B 2013/5, 4093/2	Treatise on Three Angles [of a Triangle] (Risālat al-zawāyā al-thalātha).
B 2166/3	Rules of Arithmetic (Qawā`id al-ḥisāb).
B 2352/4	Explanation of Celestial Spheres (Tashrīḥ al-aflāk). Treatise does not coincide with the work (No 1058, A1) of al-`'Amili with the same title.
B 2524/1	Commentary on the "Essence of Arithmetic (Sharḥ Khulāṣat al-ḥisāb). Commentary on the work (No 1058, M1) of al-`Āmilī.
B 2553/3	Introduction to the Science of Projection onto a Plane (Muqaddima fī `ilm al-tasṭīḥ).
B 2837/1	The Astrolabe (Asṭurlāb).
B 4007, 4093/3	Commentary on "Angles in Geometric Problems" (Sharḥ Zawāyā fi'l-masā'l al-handasiyya).
B 4349	Qibla (Qibla).
B 4403/3	The Greatest Height of a Mountain (Irtifā` a`ẓam al-jibāl).
B 4791/7	Memoir for Minds on the order of Constructing the Astrolabe (Tadhkira al-albāb fī ṣifa `amal al-asṭurlāb).
B 5430/1	Treatise on the Science of Stars (Risāla fī `ilm al-nujūm).
B 5545/14	Problems in the Science of Arithmetic (Mushkilāt fī `ilm al-ḥisab).
Cf.	Treatise (No 420, M4) of al-Khayyām.
B 5553/2	Treatise on the Astrolabe (Risāla-yi hay'a) T.
B 5746/4, M 151	[Geometric treatise].
B 5746/5	Comments on "Angles of a Triangle" of Sa`d al-Din (Ḥāshiyat Zawāyā al-muthallath al-Sa`diyya). Commentary on the work (No 772, M2) of al-Taftazānī.

B 5746/6	Other Comments on "Angles" (Ḥāshiya ukhrā li'l-Zawāyā). Commentary on the same treatise of al-Taftazānī.
B 5775/1	Treatise on Knowledge of the Azimuth of Qibla (Risāla fī ma`rifat samt Qibla).
B 6077	Selected from Timekeping on the Knowledge of Qibla and Times (Nukhbat al-mīqāt fī ma`rifat al-Qibla wa'l-awqāt).
B 6217	Concise Explanation of Selected Chapters on Geometry of Squares (Talkhīṣ min mufaṣṣal al-abwāb fī handasa-yi murabba`āt) P.
D 2120/3	Tables (Jadāwil).
M 65/1	Commentary on "Thirty Chapters" (Sharḥ Sī faṣl) P. Commentary on the work (No 606, A16) of al-Ṭūsī.
M 151/1	Geometric Problems (Handasiyyāt).
M 151/6.	Treatise on the Science of Arithmetic (Risāla fī `ilm al-ḥisāb) P.

BOSNIA AND HERCEGOVINA

Sarajevo Ghazi Husrev Beg Library

137/10	Opening of Mystery within the Operations with the Astrolabe (Iẓhār al-sirr al-mawḍū` fī'l-`amal bi'l-asṭurlāb).
551/6	Treatise on Operations with the Astrolabe (Risāla fī'l-`amal bi'l-asṭurlāb).

BULGARIA

Sofia National St.Cyril and Methodius Library

1750	Yamin [al-Dawla] Zīj (Zīj-i Yamīnī). Perhaps this zīj was dedicated to Sultan Mahmud Ghaznawi (998-1030).

EGYPT

Alexandria Municipal Library

Hisab 11	[Commentary on the work (No 878, M1) of al-Zamzamī].

Cairo National Library

`Aqaid 3964/6	Concise Treatise on the Knowledge of Numbers by Fingers (Risāla mukhtaṣara fī ma`rifat al-a`dād bi'l-aṣābi`).
Falak 3824/12	Treatise on the Knowledge of Lunar Stations and their Indications for Determining the Hours of Night (Risāla fī ma`rifat manāzil al-qamar wa'l-istidlāl bihā fī ma`rifat sā`āt al-layl).
Falak 3993/2.	[Treatise on Equatorial Semicircle].
Falak 4017	Mīqāt 631. [Tangent Tables to Base 60 with 3 Sexagesimal Digits].
Falak 4031/2	Book of Pearls and Sapphires on Principles of Timekeeping (Kitāb al-durar wa'l-yawāqīt fī uṣūl al-mawāqīt).
Falak 4528/3	Treatise on the Existence of Two Lines which come Close without Meeting (Risāla fī wujūd khaṭṭayn yaqrubān wa lā yaltaqiyān).
Falak 9740	[Treatise on Theoretical Astronomy].
Falak 17289/1	[Treatise on the Instrument Called "Wing of Raven"].
Falak 17289/2	Concise Treatise on the Instrument called Triangular Quadrant or Perfect Sinus [Instrument] (Risāla mukhtaṣara fī'l-āla musammāt bi'l-rub` al-muthallath aw al-jayb al-tāmm). Treatise on the instrument invented by Ibn al-Shāṭir (No 750).
Falak 22519	Riyad 296/1. Comprehensive Zīj (al-Zīj al-shāmil). Research: GAS (V 324-325), where this zīj is erroneously attributed to Abū'l-Wafā al-Buzjānī (No 252), SIAT (7).
Hay'a 19	[Super-commentary on the commentary (No 808, A1) by al-Rūmī on the work (No 547, A1) of al-Jaghmīnī].

Hay'a 45	Treatise on the Shape of Planets and their Distances (Risāla fī `ilm hay'at al-kawākib wa maqādir ab`ādihā).
Hay'a 48	[Commentary on an Anonymous Treatise on Theoretical Astronomy]. The treatise gives information on Venus transits. Research: Goldstein [5].
Lugnat 4368	Desire of Timekeepers and Gift of Reflections (Munyat al-muwaqqitīn wa tuḥfat al-mutafakkirīn).
Majami` 607/3	[Treatise on Turkish Units in Arithmetic].
Majami` 705/5.	Treatise on Lunar Stations (Risāla fī manāzil al-qamar).
Majami` 3463/5	[Treatise on Theoretical Astronomy].
Mīqāt 64/7	Mīqāt 797 = Zaki 740/2. Table of Sexagesimal Ratio (Jadwal al-nisba al-sittīniyya). 60 x 60 multiplication table. Research: King [4, 19].
Mīqāt 88	Smart Treatise on Operations with the Instrument called Shikkāziyya (Risāla laṭīfa fī'l-`amal bi'l-āla al-musammāt bi'l-shakāziyya).
Mīqāt 136/4, 715	[Cotangent Tables to Base 12 with 3 Sexagesimal Digits].
Mīqāt 138/1	Treatise on Operations with the Crescent Quadrant (Risāla fī'l-`amal bi'l-rub` al-hilālī).
Mīqāt 138/10	Threading Pearls on Operations with the Crescent Quadrant (Naẓm al-la'ālī' fī'l-`amal bi'l-rub` al-hilālī).
Mīqāt 138/14	Results of Reflexions on Construction by Sines and Chords (Natījat al-afkār fī'l-`amal bi-jayb wa'l-awtār).
Mīqāt 173/4	Taymur riyad. 305. Smart Treatise on Operations with the Globe (Risāla laṭīfa fī'l-`amal bi'l-kura) = Bratislava (305).
Mīqāt 185/1	Threading Jewels from Splendid Pearls (Naẓm al-jawāhir min al-Durr al-fākhir). Abridgement of Splendid Pearls on Construction of Hours and Lines of Surplus of Turn (al-Durr al-fākhir fī waḍ` al-sā`āt wa khuṭūṭ faḍl al-dāir) - (not extant).
Mīqāt 187	[Almanac Arranged according to Coptic Months].
Mīqāt 291/2	[Names of Units of Weights and Measures in Arabic and Coptic].
Mīqāt 533	Herdsman of Stars (Rā`ī al-kawākib). Zīj with tables for the latitude 33° 30⁰ of Algiers.
Mīqāt 568/2	Treatise on Operations with the Absent Sine (Risāla fī'l-`amal bi'l-jayb al-ghā'ib).
Mīqāt 570	[Treatises on Navigation]. Treatises contain numerous astronomical tables.
Mīqāt 573/2	Use in Knowledge of the Moon in any Station (Fā'ida fī ma`rifat al-qamar fī ayy manāzil).
Mīqāt 573/3	Fadil majami` 180/3 = Halim mīqāt 19/1 = Tal`at mīqāt 255/2. Treatise on Names of [Lines] Drawn on the Astrolabe and some its Constructions (Risāla fī asmā rusūm al-asṭurlāb wa ba`ḍ a`mālihā) = Berlin (5810).
Mīqāt 573/4	Treatise on the Knowledge of Distances and Volumes (Risāla fī ma`rifat al-ab`ād wa'l-ajrām). Arabic translation of a Persian treatise.
Mīqāt 602	Section on Knowledge of the Solution of Ephemerides in a Concise way (Faṣl fī ma`rifat ḥall al-taqwīm `alā sabīl al-ijmāl).
Mīqāt 620/1	Light of Projects on Principles of Projecting onto a Plane and Drawing Tympanums (al-ḍaw' al-lā'iḥ fī uṣūl al-tasṭīḥ wa rasm al-ṣafā'iḥ).
Mīqāt 644/1	Eternal Generous Victory on the Knowledghe of Turn and Its Horizontal Surplus (al-Fatḥ al-karīm al-bāqī fī ma`rifat al-dā'ir wa faḍlihi āfāqī).
Mīqāt 689	[Tables for Finding the Hour-Angle from the Solar Altitude for all Latitudes].
Mīqāt 728/2	[Treatise on the Winged Quadrant].
Mīqāt 781/1	[Treatise on Operations with the Octant].
Mīqāt 781/2	Treatise on the Knowledge of Operations of Sine [Instrument] with the Octant (Risāla fī ma`rifat `amal al-jayb bi'l-thumn).
Mīqāt 781/4	[Treatise on Equatorial Semicircle].

Miqāt 948/3	Chapter on Knowledge of the Entry of the Sun in [Lunar] Stations (Bāb ma`rifat ḥulūl al-shams fi'l-manāzil).
Miqāt 948/4	Fragment on Knowledge of the Midday Shadow in feet in Byzantine Months (Qiṭ`a fī ma`rifat ẓill al-zawāl bi'l-aqdām fi'l-ashhur al-Rūmiyya).
Miqāt 969/4	Treatise on Quadrant of a Circle (Risāla fī rub` al-dā'ira).
Miqāt 1001	Treatise on Operations with Tympan for [All] Horizons Called Universal (Risāla fi'l-`amal bi'l-ṣafīḥa al-āfāqiyya al-musammāt al-jāmi`a).
Miqāt 1046/3	[Treatise on Lunar Stations] The treatise contains table of their positions for 1679.
Miqāt 1108/2	Use of the Knowledge of Rising Yemeni Sirius (Fā'ida fī ma`rifat ṭulū` al-Shi`ra al-Yamaniyya).
Miqāt 1147	[Treatise on Computation of Eclipses and Lunar Visibility of the Crescent].
Miqāt turki 19	Treatise in Turkish on Operations with the Sine [Quadrant] (al-Risāla al-turkiyya fi'l-a`māl al-jaybiyya).
Miqāt turki 22	[Treatise on Ephemerides] T.
Riyad. 260/2	Book on Parallaxes (Kitāb ikhtilāf al-manāẓir).
Riyad. 660/2	Treatise on Inheritance (Risāla fi'l-mawārīth) T.
Riyad. 703/5	[Notes on Determining sin 1° and of the Theory of Parallels].
`Ulum 20411, 22581	[Commentary on "White Pearl"]. Commentary on the work (No 984, M1) of al-Akhḍarī.
Fadil majami` 180/2	Treatise on Tympan for [All] Horizons (Risālat al-ṣafīḥa al-āfāqiyya).
Fadil majami` 143/32	[Super-commentary on Commentary on "Guarantee"]. Super-commentary on commentary (No 1063, A7) of al-Khalkhālī on the work (No 706, E3) of al-Bukhārī, on Indian circle.
Fadil mīqāt 57/1	[Sine Tables with 3 Sexagesimal Digits in Verses].
Fadil mīqāt 68	[Prayer tables for latitude 21° of Mecca].
Fadil mīqāt 96/3	[Treatise on Gnomon Serving Two Sundials Simultaneously].
Fadil mīqāt 142/5	Section on the Knowledge Lunar Stations (Faṣl fī ma`rifat manāzil al-qamar).
Fadil mīqāt 144/2	[Treatise on Finding Geographical Latitude from a Circumpolar Star].
Fadil mīqāt 144/3	Taymur mīqāt 79/4. Treatise on Operations with the Almucantar Quadrant (Risāla fi'l-`amal bi-rub` al-muqanṭarāt).
Fadil mīqāt 149/1	Section on the Science of Explanation of Division of [Lunar] Stations by Seasons (Faṣl fī `ilm bayān qismat al-manāzil `ala'l-fuṣūl).
Fadil mīqāt 168/3, 179/2	[Treatise on Lunar Stations].
Fadil mīqāt 177/2	Tal`at mīqāt 230/4. Treatise (Introduction) on Reckoning in Problems with Sines and Astronomical Operations (Risāla (Muqaddima) fi'l-ḥisāb al-masā'il al-jaybiyya wa'l-a`māl al-falakiyya).
Fadil mīqāt 198/1	Limit of omprehension on Operations with the Celestial Globe (Ghāyat al-idrāk fi'l-`amal bi kurat al-aflāk).
Fadil mīqāt 201/1	[Treatise on Equatorial Semicircle].
Fadil mīqāt 203/3	Fine Details on Determining Surplus of Turn for All Horizons (Daqā'iq al-raqā'iq fī ma`rifat faḍl al-dāir li-sā'ir al-āfāq).
Fadil mīqāt farisi 8/1	Book of Hundred Twenty by the Mode of Sexagesimal Table (Kitāb al-mi'a wa'l-`ishrīn `alā ṭarīq jadwal al-sittīn) P = Istanbul (BU 4645; SM AS 2698). Research: King [29].
Fadil mīqāt farisi 8/5	[Treatise on Sexagesimal Arithmetic] P.
Fadil riyad. 15/2	Treatise on Inheritance (Risāla fi'l-tarikāt) T.
Fadil riyad. 39/2	Speech on Ratio of One Sixth (Kalām fi'l-nisba al-sudsiyya).
Fadil riyad. 39/3	Record on Drawing Altitudes in Triangles (Taqyīd fī istikhrāj al-a`mida fi'l-muthallathāt).
Fadil riyad. 40/2	[Treatise on Number Theory]. Treatise is copied by Muṣṭafā Ṣidqī (No 1347).

Fadil riyad. 40/3	Observational Instruments for Zīj of Shahinshah (ālāt-i raṣadiyya li-Zīj-i Shāhinshāhiyya) T. Treatise on instruments used by al-Sha`mī (No 1004) is copied by Muṣṭafā Ṣidqī (No 1348). Publication: Tekeli [2a].
Fadil riyad. 40/8	Operations from the Book of Euclid (`Amaliyyāt min kitāb Uqlīdis). MAA (150) and GAS (V 114) erroneously attribute this treatise to al-Ṭūsī (No 606).
Fadil riyad. 41/15	Book on Synthesis for Analysis of Premises [for Constructing] Heptagon with Equal Sides Inscribed in a Circle (Maqāla fī tarkīb li-taḥlīl muqaddimāt al-musabba` al-mutasāwī al-aḍlā` fi'l-dāira). Research: Hogendijk [5].
Khalil mīqāt 10/10	Treatise on Operations with the Universal Quadrant (Risāla fī'l-`amal bi'l-rub` al-jāmi`).
Khalil riyad. 2	Treatise on the Science of Algebra, Almucabala, Equation, Perfection, and Contraction (Risāla fī `ilm al-jabr wa'l-muqābala wa'l-ta`dīl, wa'l-talkmīl, wa'l-radd).
Kavala mīqāt 2/4	Limit of Discussion on Operations with the Hidden [Instrument] (Nihāyat al-musāmara fī'l-`amal bi'l-musātara).
Tal`at falak turki 20	Treatise on the Knowledge of Determining Ephemerides (Risāla fī ma`rifat istikhrāj al-taqwīm) T.
Tal`at majami` 635/2	Treatise on Modes of Proportional Numbers and Modes of Beloved Distribution (Risāla fī wujūh al-a`dād al-mutanāsiba wa wujūh taqsīm al-ghuramā').
Tal`at majami` 688/5	Treatise on Arithmetic and Inheritance (Risāla fī'l-ḥisāb wa'l-mīrāth).
Tal`at majami` 811/7	[Treatise on the Ka`ba and Qibla].
Tal`at mīqāt 80/1	[Sine Tables with 3 Sexagesimal Digits].
Tal`at mīqāt 80/2	[Cotangent Tables to Base 12 with 3 Sexagesimal Digits].
Tal`at mīqāt 80/4	[Versed Sine Tables with 3 Sexagesimal Digits].
Tal`at mīqāt 103/10	Short Treatise on the Instrument Called Shakāziyya (Risāla mūjaza `ala'l-āla al-musammāt bi'l-shakāziyya).
Tal`at mīqāt 119/1	Table of the Visibility of the Crescent in Seven Climates (Jadwal ru'yat al-ahilla fī'l-aqālīm al-sab`a). Research: King [48].
Tal`at mīqāt 155/1	Preferred Gnomon on Operations with the Plane Astrolabe (al-Miqyas al-murajjaḥ fī'l-`amal bi'l-asṭurlāb al-musaṭṭaḥ). This treatise is erroneously ascribed to al-Biruni (No 348). On the title folio. Research: King [29].
Tal`at mīqāt 155/2	Required Mysterious on Construction of Spherical Astrolabe (al-Maṭlab al-sirrī fī `amal al-asṭurlāb al-kurī).
Tal`at mīqāt 155/7	Chapter on Knowledge on Drawing Spider for Astrolabe (Bāb fī ma`rifat rasm al-`ankabūt li'l-asṭurlāb).
Tal`at mīqāt 214/1	Thunder [Treatise] (al-Ra`diyya). Astrological almanac arranged according to Christian months.
Tal`at mīqāt 219	[Treatise on Theoretical Astronomy].
Tal`at mīqāt 235/2	[Sine Tables with 4 Sexagesimal Digits].
Tal`at riyad. 130	Limit of Preparation in the Science of Numbers (Ghāyat al-`udad fī `ilm al-`adad).
Taymur maj. 246/6	Explanation and Guides on the Science of Astronomy and Terms of its People (Tibyān wa hidāyāt fī `ilm al-hay'a wa iṣṭ`ilāḥ ahlihā).
Taymur maj. 258/2	[Treatise on the Area of a Crescent Figure].
Taymur riyad. 53/2	[Poem on Timekeeping].
Taymur riyad. 55/2	Selected from the Science on Celestial Spheres (al-Mukhtār min `ilm al-falak).
Taymur riyad. 106/3	[Geometric Treatise].
Taymur riyad. 131/3	Concise Treatise on Properties of Operations with the Universal Tympanum (Risāla mukhtaṣara fī kayfiyyat al-`amal bi'l-ṣafīḥa al-jāmi`a).
Taymur riyad. 141/2	[Geometric Treatise].
Taymur riyad. 159/3	[Treatise on Astrolabe Shakāziyya].
Taymur riyad. 159/4	Treatise on Tympan Shakāziyya (Risāla al-ṣafīḥa al-shakāziyya).

Taymur riyad. 278/2	[Treatise on Qibla]. The treatise contains computations of the Qibla for various localities in Iran.
Taymur riyad. 325/1	Treatise on Positions of Stars on the Globe and Astrolabe (Risāla fī waḍ' al-kawakib fi'l-kura wa'l-asṭurlāb).
Zaki 441	Subtleties of Indication on Ephemerides of Planets (Laṭāif al-ishāra fī taqwīm al-sayyāra).
Zaki 706/1	Treatise on Operations with Tympanum Shikkāziyya (Risāla fi'l-'amal bi'l-ṣafīḥa al-shakāziyya).
Zaki 782/8. Noble	Treatise on Operations with the Sphere that has a Throne (Risāla sharīfa fi'l-'amal bi'l-kura dhāt al-kursī).
Zaki 782/11	[Treatise on Theoretical Astronomy].

Rawda Hairi

5/7	Verses of the Sacred Gift on the Science of Inheritance (Manẓūmat al-tuḥfa al-qudsiyya fi 'ilm al-faraiḍ).

FRANCE

Paris National Library

669	Reasoning on carat, daniq, habba, dirham, and dinar (Qawl fi'l-qīrāt wa'l-dāniq wa'l-ḥabba wa'l-dirhām wa'l-dīnār). Treatise on units of weight.
2330/9.	Substantiation in the Science of Geometry (Ta'sīs fi 'ilm al-handasa).
2330/10	Concise [Book] on the Science of Discoveries in Arithmetic (Mukhtaṣar fi fann al-futuḥ min al-ḥisāb).
2330/12	Useful Introduction to the Science of Arithmetic (Muqaddima nāfi'a fi 'ilm al-ḥisāb).
2244/6	Treatise on Properties of Observations (Risāla fi kayfiyyat al-arṣād).
2457/6	Second Book of Commentary on the Tenth Book of Euclid's "Elements" (al-Maqāla al-thāniya min tafsīr al-maqāla al-'āshira min Kitāb Uqlīdis fi'l-uṣūl). Short description: GAS (V 384).
2457/7	On Meaning of the Tenth Book (Fī ma'nā al-maqāla al-'āshira). Russian translation: Matviyevskaya [20] (25-39). Research: Matviyevskaya [5] (239-244), [20] (22-25, 39, 52). Commentary on Book X of Euclid's "Elements".
2457/9	Aims of the Work of Euclid (Aghrāḍ kitāb Uqlīdis).
2457/14	On Movement of the Moon (Fī ḥarakat al-qamar).
2457/18	Supplement to the Tenth Book of the work "Elements" (Ziyāda 'alā'l-maqāla al-'āshira min kitāb al-uṣūl).
2457/19	On Rectangular Triangles (Fī muthallathāt zāwiya qā'ima).
2457/33	[Treatise on the Trisection of an Angle].
2457/34	On Irrational Magnitudes (Fī'l-maqādīr al-ṣammā').
2457/35	Smart and Beautiful Numerical Problems (Masāil 'adadiyya laṭīfa ḥasana).
2457/40	[Solution of a Geometric Problem].
2457/41	Calculation of Residues from the Tenth Book of Euclid's "Elements" and General Information on Calculation of Binomials (Ḥisāb al-munfaṣil min al-maqāla al-'āshira min kitāb Uqlīdis wa jumlat ḥisāb dhawāt al-ismayn). Russian translation: Matviyevskaya [20] (55-71). Research: Matviyevskaya [5] (235-238), [20] (53-54, 71-84).
2457/42	On Reasoning that every Continuous [Magnitude] Is Divisible to Divisible Things Constantly and Infinitely (al-Qawl fi anna kull muttaṣil fa innahu munqasim ilā ashyā' tanqasimu dā'iman wa bi-ghayr nihāya). Short description : GAS (V 384-385)
2457/51	[Commentary on the Book X of Euclid's "Elements". Description of the manuscript: Matviyevskaya [5] (193-194).
2464/2	Approximation of the Far from Problems of Ibn al-Banna (Taqrīb al-aqṣā min masāil Ibn al-Bannā).

	Commentary on works of Ibn al-Bannā (No 696).
2467/14	[Treatise on Sums of Squares].
	It is proved that sum of squares of two numbers cannot be square when both these numbers are odd.
2468/1	[Revision of Archimedes' Treatise on the Clock] = London (Sup. 23391).
	Facsimile of the Paris manuscript: Archimedes [5] (III 341-379).
	German translation: Wiedemann and Hauser [3]. Modern Greek translaton by Stamatis: Archimedes [5] (III 229-308).
	Research: Kushakova [2].
	Description of the construction of a mechanical clock moved by water.
2468/2	[Description of a Musical Automat Ascribed to Apollonius].
	German translation: Wiedemann [54].
2468/3	[Treatise on Leveling Earth].
	German translation: Wiedemann [53].
2468/4	[Table of Specific Weights].
	Extract from treatise (No 348, Me1) of al-Bīrūnī.
	German translation: Wiedemann [52].
2468/5	[Description of Instrument for Regulating Water-Clocks]
	German translation: Wiedemann [77].
2468/6	[Mathematical treatise].
	German translation: Wiedemann [76].
	Book in 4 chapters: 1) determining of diameters of circles inscribed in regular polygons and circumscribed about them, 2) determining areas of surfaces of some solids, 3) determining volumes of some solids, 4) algebra and almucabala.
2472/2	Arithmetic for Students (Ḥisāb al-muta`allimīn).
2500/4	[Revision of Euclid's "Elements"].
2502/6	[Treatise on Determining the Azimuth of Qibla].
2506/2	Clear Explanation of the Operation According to a Precise Treatise on Diurnal Observations (Sharḥ `amal al-risāla al-daqīqa al-nahāriyya al-raṣadiyya mashrūḥan mubayyinan).
	Description of the manuscript: Ruska and Hartner [1] (204-205).
	Research: GAS (VI 290).
2513	[Revision of anonymous "Book of Improved Zīj"] (Paris 2520).
	Descriprion: SIAT (20, 22).
2519	Limit of what is Required on Operations with the Horizontal Sine Quadrant (Ghāyat al-maṭlab fī'l-`amal bi'l-rub` al-āfāqī al-mujayyab).
2519/8	[Section on Operations with the Almucantar Quadrant (Faṣl fī `amal bi-rub` al-muqanṭarāt).
	Book in 12 chapters.
2519/9	[Section on Operations with the Sine Quadrant].
	Book in 2 chapters.
2519/10	[Treatise on an Astronomical Instrument].
2520	Book on Improved Zīj (Kitāb al-zīj al-muṣṭalaḥ),
	Description of the manuscript: SIAT (20, 22). The zīj is ascribed to Ibn Yūnis (No 283) but was written in Egypt in 13 c.
2524/4, 5, 7, 8, 2542/3	[Treatise on the Astrolabe].
2524/9	On Calendars (Fī'l-taqāwīm).
2525/2	[Catalogue of Fixed Stars].
2528, 2529	Comprehensive Zīj (al-Zīj al-shāmil).
	Introduction to the zīj.
2529	[Astronomical tables].
2531/2	Delight of Observer on Operations with the Sun and the Moon (Nuzhat al-nāẓir fī'l-`amal bi'l-shams wa'l-qamar).
2532/2	On Universal Tympanum (Fī'l-ṣafīḥa al-majma`iyya).
2540/4	[Tables of Movement of the Sun and the Planets].
2540/5	[Astronomical Tables].

2542/1 Sufficient for Satisfaction on Operations with the Truncated Quadrant (Kifāya al-qanu` fi'l-`amal bi'l-rub` al-maqṭu`).
2542/4 On the Sphere with a Throne (Fī'l-kura dhāt al-kursī).
2544/2 On Operations with the Quadrant Shakāziyya (Fī'l-`amal bi rub` al-shakāziyya).
2544/3 Treatise on the Sphere with a Throne (Risāla `alā al-kura dhāt al-kursī).
2544/4 [Treatise on Finding Locations of Planets on Ecliptic].
2544/6 [Astronomical treatise] P.
2544/8 Correction of a Treatise Related to the Quadrant of a Circle (Taqwīm al-risala al-muta`alliqa bi-rub` al-dā'ira) T.
2544/10 [Treatise on an astronomical instrument].
2544/12 Guide (Irshād) P
Astronomical treatise.
2544/13 [Treatise on Qibla].
2544/14 [Astronomical treatise] T.
2546/4 Construction of the Truncated Quadrant (Fī `amal al-rub` al-maqṭu`).
2547/1. Mode of Constructing Horizontal [Sundials] (Ṭarīq `amal al-basīṭ).
2547/10 On Tympanum Zarqaliyya (Fī'l-ṣafīḥa al-zarqāliyya).
2547/11 Limit of Use in Operations with the Part that is at the End of Arc of Altitude (Ghāyat al-intifā` fi'l-`amal bi'l-bakhsh alladhī fī ākhir qaws al-irtifā`).
2547/15 Preferred in Operations with Equatorial Semicircle (al-Mufaḍḍal fi'l-`amal bi-niṣf dā'irat al-mu`addil).
2547/19 Treatise on the Almucantar Quadrant (Risāla fi'l-rub` al-muqanṭarāt) T.
2547/20, 2549/3, 2552, 6285 [Astronomical Tables].
2549/2 Delight of Observers on Nocturnal Operations (Nuzhat al-nuẓẓār fī a`māl al-layl).
2550/1 [On Determining the Qibla and Noon].
2550/2 [On the Sine Quadrant].
2550/4 [Description of the Sine Quadrant].
2550/5, 6 [On the Almucantar Quadrant].
2550/7 [On the Almucantar Quadrant] T.
2560 Chapter on Mentioning Instruments of the Astrolabe and the names on them (Bāb fī dhikr ālāt al-asṭurlāb wa'l-asmā al-wāqi`a `alayhā).
2578-2580 Assertion on Ascensions of Sirius (Ḥukm `inda ṭulū` al-Shir`ā).
2591 Perfect on Mystries of Stars (al-Kāmil fī asrār al-nujum).
2639 Knowledge on a Lunar Station on Ecliptic (Ma`rifat manzil al-qamar fi'l-buruj).
4686/6 Treatise on Operations with the Equatorial Circle (Risāla fi'l-`amal bi dāirat al-mu`addil).
4686/8 Treatise on the Astrolabe (Risāla fi'l-asṭurlāb).
5014 Treatise on Operastions with the Sine Quadrant (Risāla fi'l-`amal bi rub` al-juyūb).
5098 [Astronomical treatise].
5311/1 Solution on the Knowledge of Qibla (Fatwā fī ma`rifat al-Qibla).
5311/2 Treatise on the Construction of Horizontal Sundial (Risāla fī `amal al-rukhāma al-tabsīṭiyya).
5311/3 Treatise on Knowledge of Position of "House of Needle" Risāla fī ma`rifat waḍ` bayt al-ibra).
Treatise on magnrtic compass.
Book of Zīj (Kitāb al-zīj).
Description of the manuscript: Blochet [1] (34). Russian translation of the catalogue of fixed stars by Rosenfeld from the work (No 420, A2) of al-Khayyām: al-Khayyām [25] (225-236), al-Bīrunī [18] (159-173).
Research: Zimmermann [1].
Zīj in 7 books: 1) chronology, trigonometry (tables from zīj (No 308, A1) ibn Labbān), geography (coordinates of 120 cities), eclipses; 2) tables of altitude of pole and other astronomical tables; 3)astrological tables; 4) table of fixed stars for 1079 (from the zīj (No 420, A2) of al-Khayyām), 1080, 1111, 1141, and 1171; 5) astrological tables; 6) chronology (calendars of various nations, convertion from one era to another, chronological tables); 7) astrological tables.

5972/3	Book Consisting of Chapters on Absolutely Necessary Operations with the Astrolabe (Kitāb yataḍamanu min abwāb al-`amal bi'l-asṭurlāb mā lā budda minhu).
5972/4	Sufficient on Operations with the Horizontal Sine Quadrant for Determining Prayer times (Kifāyat al-`amal bi'l-rub` al-mujayyab al-āfāqī li-ma`rifat awqāt al-ṣalawāt).
6105	Approximated on Description of [Sine] Quadrant (Muqarrab fī waṣf al-mujayyab).
6224/1	Introduction to the Science of Predictions of Stars (Madkhal fī `ilm aḥkām al-nujūm).
6224/2	[Geometric Treatise].
Pers. 169	Introductions to [the Theory] of Corresponding and Similar Figures (Madākhil al-ashkāl al-mutashābiha wa'l-mutawāfiqa) P. Description of the manuscript: Bulatov [2]. Russian translation by Vildanova: "Vvedeniye v ucheniye" [1]. Research: Bulatov [4]. Treatise on geometric constructions.
Pers. 772/4	On Demonstration of Commensurability, Divisibility, and Reciprocal Primity of Numbers (Dar bayān-i ishtirāk u tadākhil u bayān-i a`dād) P.
Pers. 772/6	On Determining the Direction of Qibla (Dar ma`rifat-i jihat-i Qibla) P.
Pers. 772/8	On Knowledge of Cases of Measurement of Lands and Places (Dar shinākhtan-i chigūnagī-yi sanjīdan-i zamīnhā wa makānhā) P.
Pers. 772/10	[On Measurement of Areas and Volumes] P. Description of the manuscript: Blochet [2] (44). Book in 3 chapters: 1) on instruments, 2) on measurement of figures, 3) on methods of measurement
Pers. 772/11	[On Measurement of Areas and Volumes] P.
Pers. 772/12	[Arithmetical Treatise] P.
Pers. 772/13	Section on Problems of Euclid from the Second Book (Faṣl fī masāil uqlīdisiyya min al-maqāla al-thāniya) P. Commentary on book II of Euclid's "Elements".
Pers. 772/14	Proof of [Rule] of Calculus of Two Errors (Burhān ḥisāb al-khaṭa'ayn) P.
Pers. 772/15	On Subdivision of All Triangles by Lines (Fī qismat al-muthallathāt kullihā bi'l-awtār) P.
Pers. 772/16	Problems of Rarities of Arithmetic (Masāil dar nawādir-i muḥāsibāt) P.
Pers. 772/17	Extraction of Succesively Increasing Roots by Sides of Polygons (Istikhrāj al-ajdhār al-mutaḍā`afa al-mutawāliyya bi-jihat aḍlā` al-muḍalla`āt) P.
Pers. 772/23	[Geometric Problems] P.
Pers. 772/24	[Treatise on Finger Arithmetic] P.
Pers. 783/1	Second Book on Arithmetic of Astronomers (Maqāla-yi duwwum dar ḥisāb-i ahl-i tanjīm) P. Description of the manuscript: Blochet [2] (58). Book in 6 chapters: 1) on multiplication, 2) on division, 3) on extraction of roots, 4) on arithmetical operations in degrees, minutes, and seconds, 5) on testing, 6) on zodiacal signs.
Pers. 794	Zīj (Zīj) P.

GEORGIA

Tbilisi Institute of Manuscripts

AS 534/1	Essence of Astronomy (Zubdat al-hay'a).
AS 575/2	[Algebraical Treatise].
AS 575/3	Book of the Reckoner (Kitāb al-muḥāsib).
AS 575/4	[Arithmetical Treatise].
K 59	Twenty Chapters on the Knowledge of Ephemerides (Bīst bāb dar ma`rifat-i taqwīm) P. The treatise does not coincide with the work (No 938, A2) of al-Birjandi.
K 179	Knowledge of the Calendar (Ma`rifat-i taqwīm) P.
L 29, 137	Lines on Arithmetic (Suṭūr fī'l-ḥisāb).
L 87, 270	Treatise on the Northern Astrolabe (al-Risāla fī'l-asṭurlāb al-shimālī).

GERMANY

Berlin State Library

5634	Book of Abridgement of "Almagest" (Kitāb ikhtiṣār al-Majisṭī). Description of the manuscript: Ahlwardt [1] (141-143).
5636	Commentary on "Expostion of Almagest" (Sharḥ taḥrīr al-Majisṭī). Commentary on the work (No 606, A1) of al-Ṭūsī.
5718	Rules of Principles of Timekeeping and Result of Observation in Explanation of Times (Dastūr uṣūl al-mīqāt wa natījat al-naẓar fī taḥrīr al-awqāt).
5721	Great Treatise for [All] Horizons on Knowledge of Determining All Operations in Sexagesimal Ratio (Risāla `aẓīma āfāqiyya fī ma`rifat istikhrāj jamī` al-a`māl min al-nisba al-sittīniyya). Description of the manuscript: Ahlwardt [1] (186). The book in 13 chapters: 1) on multiplication and division of sexagesimal fraction, 2-8) astronomical chapters, 9) "both shadows", tangent and cotangent, 10-12) astronomical chapters, 13) on extraction of roots.
5722	Sexagesimal Table (al-Jadwal al-sittīnī).
5724	Support of Eyes in Nocturnal and Diurnal Timekeeping (`Umdat al-nuẓẓār fī mawāqīt al-layl wa'l-nahār).
5726	Word Called Operations with Lunar Eclipses (al-Kalām al-ma`rūf fī a`māl al-khusūf).
5727	Treatise on the Celestial Sphere (Risāla fī'l-falak).
5728	Handbook on the Science of Stars for the Public (Fī `ilm al-nujūm qadr mā yaḥtāj ilā'l-nās).
5730/1	Section on the Knowledge of Determining the Set of Northern and Southern [Stars] (Faṣl fī ma`rifat istikhrāj al-mawāqi` al-shimāliyya wa'l-janūbiyya).
5730/2	On Knowledge of Alternations of Seasons in [Various] Climates (Fī ma`rifat intiqāl al-fuṣūl fī'l-aqālīm).
5730/3	On Determining Declination of Walls (Fī ma`rifat inḥirāf al-ḥīṭān). Treatise on vertical and oblique sundials.
5731-5744, 5746-5747	[Astronomical Treatises]. Description of chapters 35-39 of the treatise 5733 on determining distances to inaccesible objects: Wiedemann [35] (72-75).
5748	On Altitude of Stars and Timekeeping (Fī ma`rifat al-nujūm wa'l-mawāqīt).
5770-5776	[Astronomical tables].
5781/2	Tables of Beginnings of Arabic Years (Jadāwil awā'il al-sinīn al-`arabiyya).
5785-5789	[Calendars].
5807	Treatise on Operations with the Astrolabe (Risāla fī'l-`amal bi'l-asṭurlāb).
5808	Gift to Students on Operations with the Quadrant of Astrolabe (Tuḥfat al-ṭullāb fī'l-`amal bi rub` al-asṭurlāb). The book in 18 chapters. Description of the chapter on determining distances to inaccesible objects: Wiedemann [36] (59-64).
5809	Treatise on Operations with the Astrolabe (Risāla fī'l-`amal bi'l-asṭurlāb). Description of determining distances to inaccesible objects: Wiedemann [36] (59).
5811/1	Treatise on Operations with the Northern Astrolabe (Risāla fī'l-`amal bi'l-asṭurlāb al-shimālī).
5811/2	Treatise on the astrolabe (Risāla fī'l-asṭurlāb).
5811/3	[Treatise on the astrolabe].
5814	Flowers Required on Astronomy of Celestial Spheres and Bodies (Azhār al-maṭālib fī hay'at al-aflāk wa'l-kawākib).
5822	Treatise on Operations with the Sine Quadrant (Risāla fī'l-`amal bi'l-rub` al-mujayyab).
5823	Treatise on Operations with the Sine Quadrant (Risāla fī'l-`amal bi'l-rub` al-mujayyab). Description of determining distances to inaccesible objects: Wiedemann [36] (59).
5827	Commentary on the "Introduction [to Knowledge] of Sine Quadrant" (Sharḥ muqaddimat al-rub` al-mujayyab).

	Commentary on the work (No 1006, A3) of al-Ru`aynī.
	German translation of introduction: Wiedemann [36] (45-46). Description of determining distances to inaccesible objects: Wiedemann [36] (69-70).
5830	Treatise on Operations with the Sine Quadrant (Risāla fi'l-`amal bi'l-rub` al-mujayyab).
5831-5832	[Treatises on Sine Quadrants].
5833/1, 5833/2	Treatise on Operations with the Sine Quadrant (Risāla fi'l-`amal bi'l-rub` al-mujayyab).
5847	Visible Stars (al-Kawākib al-ẓāhira).
	Commentary on the work (No 815, A17 or 24) of Ibn al-Majdī.
5861	Treatise on Operations with the Almucantar Quadrant (Risāla fi'l-`amal bi rub` al-muqanṭarāt).
5862	Treatise on Operations with the Quadrant of a Circle on which Almucantars are Located (Risāla fi'l-`amal bi rub` al-dā'ira al-mawḍū` `alayhi al-muqanṭarāt).
5863	Treatise on the Almucantar Quadrant Containing Introduction (Risāla `alā rub` al-muqanṭarāt mushtamila `alā muqaddima).
5868	Introduction to Operation with the Plane Called Sundial by Method of Geometry for Simplification of these Operations in the Mosque and Madrasa (Muqaddamat `amal al-basīṭa al-musammāt bi'l-rukhāma bi-ṭarīq al-handasa li-tashīl `amalihā fi'l-jāmi` wa'l-madrasa).
5869	Treatise on the Sphere that has a Throne (Risāla fi'l-kura al-musammāt dhāt al-kursī)
	Cairo (Falak 3844/8 = Fadil mīqāt 101/1 = Taymur rpyad. 10/11).
5926	Comments on Euclid (Ḥawāshī Uqlīdis).
5928	Treatise on Proof of Euclid's Postulate by a Man with Unknown Name (Risāla fī bayān muṣādarat Uqlīdis li-rajul majhūl al-laqab).
	Description on the manuscript: Ahlwardt [1] (314).
5953	Treatise on Principle of the Science of Measurement Abstracted from Examples (Risala `alā uṣūl `ilm al-misāḥa mujarrada min al-amthila).
	Description of the manuscript: Ahlwardt [1] (323).
	The book in 5 sections: 1) measuring squares; 2) measuring triangle; 3) measuring polygons; 4) measuring circle and its parts; 5) measuring solids and their surfaces.
5954	Treatise on the Science of Measurement (Risāla fī `ilm al-misāḥa).
5955	Treatise on Measurement and Inheritance (Risāla fi'l-misāḥa wa'l-waṣāyā).
5965	Treatise on Speech on what is required in the Science of Arithmetic (Risāla `alā al-kalām `alā mā yuṭlab li-`ilm al-ḥisāb).
5993	Poem on the Science of Inheritance and Algebra and Almucabala (Manẓūma fī `ilm al-farāiḍ wa'l-jabr wa'l-muqābala).
6003	Rules of the Science of Arithmetic (Qawā`id fī fann al-ḥisāb).
6004	Book on the Science of Arithmetic (Kitāb fī `ilm al-ḥisāb).
6005	Treatise on Open Arithmetic (Risāla fī ḥisāb al-maftūḥ).
6006	Great Treatise (al-Risāla al-`aẓīma).
6007/1	Book of Collection on [Rule] of Two Errors (al-Kitāb al-jāmi` fi'l-khaṭa'ayn).
6007/2	Multiplication of Fractions by Fractions and Multiplication of Integers on Fractions (ṭarb al-kusūr fi'l-kusūr wa ḍarb al-ṣiḥḥā ḥ fi'l-kusūr).
6011/1	Poem on Properties of Joints in Finger Arithmetic (Manẓūma fī kayfiyyat al-`uqūd al-ḥisābiya bi'l-aṣābi`).
Oct. 3964	Ancient Marvel (Uṭrufa qadīma).
	Description of the manuscript: Wagner [1] (209).
	Treatise on amicable numbers near to the chapter on amicable numbers in the work (No 1058, E1) of al-`Āmilī: like this chapter, this treatise begins from the indication of the work (No 317, PH7) of Ibn Sina on the role of love in the world, and the rule of construction of amicable numbers from the work (No 103, M4) of Ibn Qurra is given. Wagner [1] believes that the author of this treatise is al-`Āmilī himself, but the treatise does not coincide with the chapter of (No 1058, E1) al-`Āmilī.
Pers. 81/6	Book of the Science of Arithmetic (Kitāb dar `ilm-i ḥisāb).
	Description: Pertsch [1] (151).

	Work in 3 books: 1) on Hindu arithmetic, 2) on arithmetic of astronomers, 3) on measurement.
Pers. 326/1	[Treatise on astrolabe] P.
	The book in 20 chapters, but does not coincide with (No 606, A14) of al-Ṭusī.
Pers. 326/3	Concise [Book] on knowledge of the Globe (Mukhtaṣar dar ma`rifat-i kura) P.
Pers. 326/4	On Construction of the Globe (Dar ṣan`at-i kura) P.
Pers. 326/5	On Knowledge of Observational Instruments, Astrolabe, and others (Dar ma`rifat-i ālāt-i raṣad u asṭurlāb u ghayrihī) P.
	Description of the manuscript: Pertsch [1] (347).
	Work in 3 books plus introduction.
Pers. 329/2, 330/3	[Supplement to the "Treatise on Astronomy for Mu`īn al-Dīn]
	Supplement to the work (No 606, A9) of al-Ṭūsī.

Berlin Institute for History of Medicine and Natural Sciences (IGMN)

9783/26	Treatise on Joints (Risālat al-`uqūd).
	Treatise on finger arithmetic.
	Description of the manuscript: Ruska and Hartner [1] (171).
II. 2	Treatise on Sexagesimal Ratio in Calculation of the Science of Timekeeping (Risālat al-nisba al-sittīniyya fī ḥisāb `ilm mīqāt).
	Description of the manuscript: Ruska and Hartner [1] (173-174).
II. 5	Treatise on Operations with Almucantar Quadrant (Risāla fi'l-`amal bi-rub` al-muqantarāt).
	Description of the manuscript: Ruska and Hartner [1] (175-176).
	The book in 5 chapters.
II. 11	Brilliant [Stars] on Operations with the Almucantar Quadrant (al-Zāhirāt fi'l-`amal bi-rub` al-muqanṭarāt).
	Description of the manuscript: Ruska and Hartner [1] (181-182).
	The book in 10 chapters.
II. 12	Treatise on Operations with the Sine Quadrant (Risāla fi'l-`amal bi'l-rub` al-mujayyab).
	Description of the manuscript: Ruska and Hartner [1] (182).
	The book in 20 chapters.
II. 13	Treatise in Turkish on Almucantars (Risāla al-muqanṭarāt bi'l-Turkī) T.
	Description of the manuscript: Ruska and Hartner [1] (182).
	The book in 21 chapters.
II. 38	Concise from "New Zīj" Related to Sultan Ulugh Beg (Mukhtaṣar min al-Zīj al-jadīd al-mansūb ilā al-sulṭān Ulugh Beg).
	Description of the manuscript: Ruska and Hartner [1] (198-201).
II. 54	Table from which the Azimuth and Time by any Altitude is Learned (Jadwal yu`lamu minhu samt al-waqt li-ayy irtifā`).
II. 56	Explanation of Ephemerides of the Sun and the Moon (Bayān taqwīm al-shams wa taqwīm al-qamar).
II. 61	Tables of Surplus of Turn for Oblique [Sundial] (Jadāwil faḍl al-dā'ir al-munḥarifāt).
II. 62	Treatise on Knowledge of Operations with the Sine Quadrant (al-Risāla fī ma`rifat al-`amal bi'l-rub` al-mujayyab).
III. 2	Premises which are necessary for the Problems of Magic Squares and their use (Muqaddamāt yajibu dhikruhā fī amr khawāṣṣ al-wafq wa manfa` atihī).

Gotha Regional Library

1378/1	Uses of Timekeeping (al-Fawāid al-mīqātiyya).
1378/3	Other Method of Determining Hours by Night and Day (Ṭarīqa ukhrā fī ma`rifat sā`āt al-layl wa'l-nahār).
1380/1	Tables of the Sun from its Rise of Two Dawns in Ephemerides of Two Moons (Jadāwil al-shams min mashriq al-fajrayn fī taqwīm al-qamarayn).
1401	[Explanations of "Zīj of al-Ḥākim"].
	Commentary on chapters I and III of zīj (No 283, A1) of Ibn Yūnis.

1416	Northern Astrolabe (al-Asṭurlāb al-shimālī) = St.Petersburg (Nat. 130/6).
1417	Guide for Acting (Hidāya al-`āmil) = St.Petersburg (Nat. 130/5).
1453	Book on the Theory of Timekeeping (Kitāb fī `ilm al-mīqāt).

Hamburg City Library

137/2	Treatise on Universal Tympanum for All Latitudes (Risālat al-ṣafīḥa al-jāmi`a li'l-`urūḍ kullihā).
138/1	[Super-commentary on the commentary (No 808, A1) by al-Rūmī on the work (No 547, A1) of al-Jaghmīnī].
225	[Revision of Ptolemy's "Almagest"].

Leipzig City Library

800/1	[Astronomical Treatise]. Book in 130 sections.
800/2	[Treatise on the Astrolabe].
814/2	Table of Correspondence of Events according to Byzantine Months (Jadwal al-tawqīyāt wa'l-ḥawādith `ala shuhūr al-Rūm).
814/3	Introduction to the Science of Celestial Sphere (Muqaddima fī `ilm al-falak).
819	Note in the Science of Timekeeping and Almucantars (Nubdha fī `ilm al-mīqāt wa'l-muqanṭarāt).
820/1	Book on Celestial Spheres (Kitāb al-aflāk).
820/3	Introduction to the Science on Rises and Sets of Zodiacal Signs, [Lunar] Stations, and Planets (Muqaddima fī ma`rifat al-ṭulū` wa'l-ghurūb fī'l-burūj wa'l-manāzil wa'l-kawā [kib]).
830/4	Section on the order of Roman Months and their Subdivision (Faṣl fī tartīb shuhūr al-Rūm wa qismatihā).
830/6	On the Knowledge of [Lunar] Stations and Zodiacal Signs (Fī ma`rifat al-manāzil wa'l-burūj).

Munich State Library

853	[Zīj].
865	Sexagesimal Ratio Used in Astronomical Operations (al-Nisba al-sittīniyya al-musta`mala fī'l-a`māl al-falakiyya). Astronomical tables.
866	Tables in Two Sexagesimal Ratios to the End of Perdection (Jadāwil al-nisbatayn al-sittīniyya `alā'l-tamām wa'l-kamāl).
871	[Astronomical Treatise].
876	Book of Study of the Science of Rises and Sets (Kitāb al-muṭālib fī `ilm al-mashāriq wa'l-maghārib).

HUNGARY

Budapest University Library

Quart. 23	Treatise on Arithmetic (Risāla-yi ḥisāb) T.
Oct. 266	Measurement (Misāḥat) T.

INDIA

Aligarh Azad Library

`Abd al-Hayy 133/125	Treatise on Knowledge of the Globe (Risāla dar ma`rifat-i kura) P.
Habib Ganj 44/1	Commentary on "Treatise on Astronomy" of al-Qushji (Sharḥ-i Risāla-yi hay'at-i Qushjī) P.
Habib Ganj 44/19	Commentary on Ilkhanid Zīj (Sharḥ-i Zīj-i Īlkhānī) P.
Qutb al-Din 43/1	Ephemerides of Muhsin (Taqwīm al-Muḥsin).
Shafta 209	Treatise on Siyaq (Risāla-yi siyāq) P.

Subhanallah Sup. 511/7 Treatise on the Science of Arithmetic (Risāla dar `ilm-i ḥisāb) P.
Subhanallah Sup. 535 Treatise on Optics and the Science of Astronomy (Risāla-yi manāẓir dar `ilm-i hay'at) P.
Sulayman 161/21 Concise [Book] on Astronomy (al-Mukhtaṣar fi'l-hay'a).
Sulayman 522/32 Venus Radiance of the World (Ghurra-yi asfuruz-i `ālam) P.

Aligarh Muslim University Library
61/2 Treatise on the Astrolabe (Risāla dar asṭurlāb) P.

Bombay Asiatic Society
1 Explanation of Operations (Tashrīh al-a`māl)
2 Commentary on "Propositions of Substantiation of Geometry (Sharḥ Ashkāl al-ta'sīs handasa).
Commentary on the work (No 655, M1) of al-Samarkandī.
5 Euclid's "Elements on the Science of Geometry" (Uṣūl Uqlīdis fī `ilm al-handasa).
Revision of Euclid's "Elements".
6 Euclid (Uqlīdis).
Possibly revision of Euclid's "Elements".
7 Commentary on "Twenty Chapters on Astrolabe" of Khwāja Naṣīr [al-Dīn] (Sharḥ-i Bīst bāb asṭurlāb-i khwāja Naṣīr) P.
Commentary on the work (No 606, A14) of al-Ṭūsī.
8/1 Sufficient on Twelve Zodiacal Signs (Kifāya burūj ithnay `ashara).
8/3 Comments on Abridgement of "Concise Exposition" (Ḥāshiya bar mukhtaṣar al-Talkhīṣ) P.
Possibly commentary on the work (No 696, M1) of Ibn al-Bannā.
19 Sexagesimal Table with Some Astronomical Rules (Jadwal-i sittīn bā ba`ḍī qawā`id-i nujūmiyya) P.
27 The Science of Arithmetic and Indian Reckoning of Siyaq (`Ilm-i ḥisāb u raqūm-i siyāq-i hindī) P.
Treatise on practical arithmetic.
29 Treatise on Siyaq (Risāla dar siyāq) P.
Treatise on practical arithmetic and geometry.
55 Zīj – Light on Resolution [of Difficulties] of Seven [Planets] (Zīj al-Lum`a fī ḥall al-sab`a).
The zīj was written in 1605.
56 Constellations of Stars (Ṣuwar al-kawākib).
57 Poem on Location of Fixed [Stars] with Images (Qaṣīda manẓūma fī mawāḍi` thawābit bi-ashkāl).
59 On Construction of the Astrolabe and other [Instruments] (Dar ṣan`at-i asṭurlāb wa ghayrihi) P.
67 Sufficient for Satisfaction on Operations with the Quadrant (Kifāyat al-qanū` fi'l-`amal bi'l-rub`).

Calcutta Asiatic Society of Bengal
491 Essence of Ephemerides (Khulāṣa-yi taqwīm) P
1473 Commentary on Arithmetical Chapter (Sharḥ bāb al-ḥisāb).
1474 Treatise on arithmetics. (Risāla fi'l-ḥisāb).
1482/2 Treatise on Mercury (Risālat `Uṭārid),
Treatise is dedicated to Ulugh Beg (No 816).
1500/4 Hundred Chapters on the Astrolabe (Ṣad bāb dar usṭurlāb) P.
1501 Commentary on Memoir (Sharḥ al-Tadhkira).
Commentary on the work (No 606, A10) of al-Ṭūsī.
1502 Useful Table (al-Jadwal al-mufīd).
Tables of appearance of the Sun in various zodiacal signs and Lunar stations, coming morning, noon, and spring equinox.

1506	Book on Events (Kitāb al-Mulḥama). Astronomical and meteorological book in 16 chapters: 1-2) on Solar and Lunar eclipses; 3-4) on Solar and Lunar radiance; 5) on the crescent; 6-7) on lightning and thunder; 8-9) on wind, rain and storm; 10) on cold weather; 11) on the rainbow; 12) on earthquakes; 13) on falling stars; 14) on comets; 15) on "spears appearing on heavens"; 16) on atmospheric events.
Curz. 400	Treatise on investigation of the Azimuth of Qibla (Risāla dar taḥqīq-i samt-i Qibla) P.
Curz. 577/2	Rule of Determining the Visibility of the Crescent (Dastūr-i istikhrāj-i ru'yat-i hilal) P.
Curz. 677/11	On Knowledge of Chinese Dates (Dar ma'rifat-i ta'rīkh-i Khatay) P.

Calcutta Buhar Library

338/2	Treatise on Arithmetics (Risāla fī'l-ḥisāb).

Hyderabad Central State Library

Jadid 1447, 4972, 5255	Treatise on Weights (Risāla-yi awzān) P.
Jadid 1600	Balance of Arithmetic (Mīzān al-ḥisāb).
Jadid 2668	Treatise on the Science of Astronomy (Risāla dar 'ilm-i hay'a) P.
Jadid 2669, riyad. 317-320	Treatise on Siyaq (Risāla-yi siyāq) = Aligarh (Azad. Shafta 209).
Jadid 3290	Treatise on the Astrolabe (Risāla-yi asṭurlāb) P.
Jadid 3423, 4066, 5050, riyad. 438	Treatise on Arithmetic (Risāla-yi ḥisāb).
Jadid 3751	Astronomical Treatise (Risāla falakiyya). Treatise on stars and constellations.
Jadid 4004	Treatise on the Calendar (Risāla-yi taqwīm) P.
Jadid 5157, 15999	Treatise on Astronomy (Risāla-yi hay'a) P.
Riyad. 2	Commentary on Euclid (Sharḥ Uqlīdis).
Riyad. 14	Treatise on Projection onto a Plane (Risāla dar tasṭīḥ) P.
Riyad. 31/6	Finger Joint ('Aqd al-anāmil). Treatise on finger arithmetic.
Riyad. 42	Veil of Students on Operations with the Astrolabe (Ḥijāb al-ṭullāb fī'l-'amal bi'l-asṭurlāb).
Riyad. 114	Hundred Chapters on the Astrolabe (Ṣad bāb dar asṭurlāb) P = Calcutta (1500/4).
Riyad. 124	Algebra and Almucabala (Jabr u muqābala) P.
Riyad. 129	Explanation of Observational Instruments (Sharḥ-i ālāt-i raṣadiyya) P. This treatise does not coincide with treatise (No 802, A12) of al-Kāshī.
Riyad. 134	Lamp of Arithmetic (Misbāḥ al-ḥisāb).
Riyad. 142, 148, 507	Commentary on Treatise on Astronomy of al-Qushji (Sharḥ-i Risāla-yi Hay'at-i Qushjī) P Aligarh (Azad Habib 44/1.
Riyad. 149/3-13	Collection of Treatises on the Astrolabe (Majma' rasāil asṭurlāb).
Riyad. 153	Treatise for Ghazan-Khan on Instruments of Observation (Risālat al-Ghāzāniyya fī'l-ālāt al-raṣadiyya) P.
Riyad. 159	Treatise on Nature (Risāla-yi ṭabī'iyyat) P.
Riyad. 159a	Treatise on the Knowledge of Astrolabe (Risāla dar ma'rifat-i asṭurlāb) P.
Riyad. 163	Treatise on Water Balance (Risāla-yi mīzān-i āb) P.
Riyad. 169	Treatise of Knowledge of Astronomy and Celestial Spheres and Four Elements (Risāla-yi ma'rifat-i hay'at u aflāk wa anāṣir arba') P.
Riyad. 171	Treatise on Knowledge of the Globe (Risāla dar ma'rifat-i kura) P.
Riyad. 182	Full Moon of Arithmetic (Badr al-ḥisāb).
Riyad. 183	Treatise on Determining Ephemerides (Risāla istikhrāj-i taqwīm) P.
Riyad. 204	Lock to Mind in Astronomy (Kalīd-i 'aql dar hay'a) P.
Riyad. 212	Gift to Counsils [of Scientists] (Tuḥfat al-majālis). Mathematical treatise.

Riyad. 217	Treatise on Geometry (Risāla-yi handasa) P.
Riyad. 218	Treatise on Geometry (Risāla dar handasa) P.
Riyad. 311	Essence of Siyaq (Khulāṣa al-siyāq).
Riyad. 515	Treatise on Astronomy (Risāla-yi hay'a) P.
Riyad. 533	On Explanation of the Science on Lines of Astrolabe (Dar bayān-i `ilm-i khuṭūṭ-i asṭurlāb) P.
Riyad. 808	Exposition of Euclid in Verses (Taḥrīr Uqlīdis manẓūm) P.
Sham. 129	Treatise on Measurement (Risāla-yi misāḥa) P
Sham. 165	Knowledge of the Calendar (Ma`rifat-i taqwīm) P.

Hyderabad Nizamiyya Tibbiyya College

2290	Concise [Treatise] on Knowledge of the Astrolabe (Mukhtaṣar dar ma`rifat-i asṭurlāb) P

Hyderabad Osmania University Library

250	Treatise on Arithmetic (Risāla-yi ḥisāb) = Hyderabad (riyad. 438).
252	Treatise on Explanation of Operations with the Sine Quadrant (Risāla dar bayān-i `amal-i rub`-i mujayyab) P.
286	Commentary on 'Concise Treatise on the Calendar' of al-Ṭūsī (Sharḥ-i Mukhtaṣar-i Taqwīm-i Ṭūsī) P. Commentary on the work (No 606, A16) of al-Ṭūsī (Sī faṣl).
290	Treatise on Knowledge of the Construction of Horizontal Sine Quadrant (Risāla dar ma`rifat-i `amal-i rub`-i mujayyab āfāqī) P.
334	Lamp of Arithmetic (Misbah al-ḥisāb) (= Hyderabad riyad.134).
375	Commentary on Euclid (Sharḥ Uqlīdis) (= Hyderabad riyad. 2).
520/M	Almucantars (al-Muqanṭarāt).
1173	Treatise on Astronomy (Risāla-yi hay'a) P.
1306	Method of Measurement of Areas (Ṭarīqa-yi misāḥat-i raqba-yi dihāt) P.
1552	Knowledge of the Entry of the Sun into Syrian and Yemeni Stations (Ma`rifat ḥulūl al-shams fī'l-manāzil al-Sha'miyya wa'l-Yamaniyya).

Hyderabad Sa`idiyya Library

Hay'a 16	Treatise on the Construction of the Globe (Risāla dar a`māl-i kura) P.
Hay'a 18	Concise [Treatise] on the Calendar (Mukhtaṣar dar taqwīm) P.
Hay'a 28	Treatise on the Property of the Construction of Hour [Lines] (Risāla fī kayfiyyat `amal al-sā`āt).
Hay'a 39/1	Collection of Observed Stars (Majma` kawākib marṣūda).
Hay'a 39/3	Treatise on Determining Arcs of Eclipses (Risāla fī istikhrāj-i khusūf-i qisī) P.
Riyad. 28	Removal of the Veil from Exposition of (Kashf al-qinā` `an al-Taḥrīr Thawdhusyūs).

Hyderabad Salar Jung Library

Hay'a 3	Astronomical Treatise (al-Risāla al-falakiyya).
Hay'a 7/1-2, 37/1-2	Treatise on Knowledge of the Globe (Risāla dar ma`rifat-i kura) P.
Hay'a 9, 11	Treatise on Astronomy (Risāla-yi hay'a) P.
Hay'a 23	Commentary on "Treatise for Fath al-Din" of Badr al-Dīn Muḥammad Sibṭ al-Māridīnī (Sharḥ Risāla Fatḥiyya li-Badr al-Dīn Muḥammad Sibṭ al-Māridīnī). Commentary on the work (No 873, A7).
Hay'a 24	Sufficient for Students on the Construction of Astrolabe (Ghunyat al-ṭullāb fī san`at al-asturlāb).
Hay'a 27	Book of Zīj (Kitāb-i zīj) P.
Hay'a 30	Sexagesimal Ratio in Calculations of Astronomical Operations (al-Nisba al-sittīniyya fī ḥisāb al-a`māl al-falakiyya).
Hay'a 31/6	Gift to Friends on the Science of the Art of Astrolabe (Tuḥfat al-aḥbāb fī `ilm ṣinā`at al-asṭurlāb).

Hay'a 32	Treatise on Knowledge of Calendar Operations (Risāla dar ma`rifat-i `amal-i taqwīm) P.
Hay'a 33, 35/2, 37/4, 40	Treatise on Knowledge of Globe (Risāla dar ma`rifat-i kura) P.
Hay'a 34	Treatise on the Knowledge of Astrolabe (Risāla dar ma`rifat-i asṭurlāb) P.
Hay'a 34a, b	Treatise on the Astrolabe (Risāla-yi asṭurlāb) P.
Hay'a 37/1	Treatise on the Knowledge of the Globe and the Astrolabe (Risāla dar ma`rifat-i kura u asṭurlāb) P.
Hay'a 38/1	Treatise on Ten Joints (Risāla-yi `uqūd-i `asharat) P. Treatise on finger arithmetic.
Riyad. 2	Principal Propositions in "Exposition of Euclid (Ashkāl aṣl fī Taḥrīr Uqlīdis).
Riyad. 3	Translation of the Precious Commentary on "Propositions of Substantiation" (Tarjama-yi nafis Sharḥ-i Ashkāl al-ta'sīs). Commentary on the work (No 655, M1) of al-Samarkandī.
Riyad. 9, 27	Treatise on Arithmetic (Risāla-yi ḥisāb) = Hyderabad (riyad. 439)..
Riyad. 6	Treatise on the Science of Arithmetic (Risāla dar `ilm-i ḥisāb) = Aligarh (Azad. Subh. Sup. 511/7).
Riyad. 14	Treatise on Measurement (Risāla-yi misāḥa) = (Hyderabad (Sham. 129).
Riyad. 17	Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb). Commentary on the work (No 1058, M1) of al-`Āmilī.
Riyad. 20	Concise Commentary on "Algebra and Almucabala" (Sharḥ mukhtaṣar fi'l-Jabr wa'l-muqābala).
Riyad. 40/1	Comments on the "Exposition of Euclid" (Ḥāshiya `alā Taḥrīr al-Uqlīdis). Comments on revision (No 606, M1) of al-Ṭūsī of Euclid's "Elements".
Riyad. 103/5	Treatise on Astronomy (Risāla fi'l-hay'a).

Madras Mulla Firuz Library

86/3	Treatise on Determination of Proprieties of Operations with the Plane Moon Astrolabe (Risāla fī istikhrāj kayfiyyat al-`amal bi'l-asṭurlāb al-qamarī al-musaṭṭaḥ)
86/4	Book on Operations with the Qudrant (Kitāb al-`amal bi'l-rub`).

Madras Mysore Library

637	Treatise on Knowledge of the Globe (Risāla dar ma`rifat-i kura) P.
642	Explanation of Division of Hours (Bayān-i taqsīm-i sā`āt) P.
812	Treatise on the Science of Astronomy (Risāla dar `ilm-i hay'a) P.

Patna Bankipore Library

1033-1034	Commentary on the "Essence of Arithmetic" (Sharḥ-i Khulāṣa al-ḥisāb) P. Commentary on the work (No 1058, M1) of al-``Amili.
1065	Treatise on the Astrolabe (Risāla-yi asṭurlāb) P.
1650	Treatise on Astronomy (Risāla-yi hay'a) P.
1732	Treatise on Measuring (Risāla-yi misāḥa), Hyderabad (Sham. 129).
2427	Commentary on [the Poem of Ibn] al-Yasamīnī (Sharḥ al-Yāsamīniyya). Commentary on the work (No 521, M1) of Ibn al-Yāsamīn.
2436	Comprehensive [Treatise] on the Investigation of Angle (al-Ḥāwiya fī taḥqiq al-zāwiya).
2460, 2463	Arabized Treatise (al-Risāla al-mu`arraba). Arabic translation of a Persian astronomical treatise.
2467	Book of Zīj (Kitāb al-zīj).
2468/38	[Construction of Regular Nonagon]. English translation and research: Berggren [5].
2469/10	Problem of Determining Distances of Centers (Mas'ala fī istikhrāj ab`ād al-marākiz).
2469/11	(al-Masā'il wa'l-jadāwil li'l-muqanṭarāt).

Rampur Raza Library

1180	Treatise on Knowledge of the Globe (Risāla dar ma`rifat-i kura) P.

1183	Treatise on Knowledge of the Astrolabe (Risāla dar ma`rifat-i asṭurlāb) P = Hyder-abad (riyad. 159a).
1185b	Concise [Treatise] on Knowledge of Determining Ephemerides of Planets (Mu-khtaṣar dar ma`rifat-i istikhrāj-i taqāwim-i kawākib) P.
1214	Explanation of Compiling Zīj (Sharḥ-i istikhrāj-i zīj) P.
1244	Treatise on Arithmetic (Risāla-yi ḥisāb) = Hyderabad (riyad. 439).
2100	Treatise on Knowledge of the Construction of Sine Quadrant (Risāla dar ma`rifat-i `amal-i rub`-i mujayyab) P.
2323	Delightful Book for the Joy of Company of Friends [of Scientists] (Kitāb al-Mu'nis fī nuzhat-i ahl-i majlis) P.
2323a	Treatise on Arithmetic (Risāla dar ḥisāb) P.
3010	Treatise on Construction of the Horizontal Tympanum (Risāla dar `amal-i ṣafīhayi āfāqī) P.
3010a	Treatise on the Boat Shape Astrolabe (Risāla dar asṭurlāb-i zawraqī) P.

INDONESIA

Jakarta State Library

Sup. 631	Book on Sapphires on the Knowledge of Timekeeping (Kitāb al-yawāqīt fī ma`rifat al-mawāqīt).
Sup. 632	Gift to the Interested on the Knowledge of Approximate Determining Positions [of Planets], Times, and the Qibla (Itḥāf al-muḥib bi-ma`rifat al-tawqī`āt wa'l-awqāt wa'l-Qibla bi'l-taqrīb).

IRAN

Mashhad Library of Astan-i Quds Razavi "Imam Riza"

9	Forty (Arba`īn) P.
28	Explanation of "Exposition" (Ta`bīr al-Taḥrīr)
33	Arithmetics (Ḥisāb).
39	Explanation of Compasses (Tashrīḥ dar parkār) P.
46	Super-commentary on Commentary by Mir Sayyid Sharif on "Compendium" of al-Jaghmini (Ḥāshiya `alā sharḥ Mir Sayyid Sharīf `alā Mulakhkhaṣ al-Jaghmīnī).
	Super-commentary on commentary (No 788, A2) by al-Jurjānī on the work (No 547, A1) of al-Jaghmīnī.
69	Treatise on the Knowledge of Paints and Colours (Risāla dar ma`rifat-i alwān u rang-hā) P.
79	Treatise on Distances and Volumes and Marvels of Countries (Risāla dar ab`ād u ajrām u `ajāib-i bilād) P.
88	Visibility of the Crescent (Ruy'at-i hilāl) P.
91, 92	Treatise on Arithmetic (Risāla dar ḥisāb) P.
93	Right Balance in Arithmetic (al-Qusṭās al-mustaqīm dar ḥisāb) P.
146	Right Balance (Qusṭās al-mustaqīm).
172	Introduction to the Science of Predictions of Stars (Madkhal ilā `ilm aḥkām al-nujūm).
5258/3	Geometric Problems Called "Muhdat", That Is Premises for Algebraical Problems Obtained from Geometry (Masā'il handasiyya mutarjama bi'l-Muhdāt wa hiya muqaddimāt li-masā'il jabriyya ustukhrijat bi'l-handasa).

Mashhad Mawlawi Library

20/5, 538/8	Tables of Stars (Jadwalhā-yi nujūmī) P.
87/3	Constellations of Stars (Ṣuwar al-kawākib).
453/1	Arithmetic of Astronomers (Ḥisāb-i ahl-i tanjīm) P.
	Treatise on sexagesimal arithmetic.
453/2	Treatise on Apogee of Planets (Risāla dar awj-i kawākib) P.

481/1 Arithmetics (Ḥisāb).

497/2, 520/3 Treatise on the Knowledge of Astrolabe (Risāla dar ma`rifat-i asṭurlāb) P.

513/1 Treatise on the Construction of Astrolabe (Risāla dar ṣan`at-i asṭurlāb) P.

552/1 Treatise on Solar and Lunar Eclipses (Risāla dar khusūf wa kusūf) P.

Mashhad University Library

165 Super-commentary on Commentary on "Wisdom of Source" (Ḥashiya <`alā> Sharḥ Ḥikmat al-`ayn).
Super-commentary on the work (No 616, E1) of al-Kātibī al-Qazwīnī.

323 Commentary on "Explanation of Celestial Spheres" (Sharḥ Tashrīḥ al-aflāk).
Commentary on the treatise (No 1058, A1) of al-`Āmilī.

331 Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisab)
Commentary on the treatise (No 1058, M1) of al-`Āmilī.

333 Commentary on "Guragan Zīj" (Sharḥ-i zīj-i Guragānī) P.
Commentary on the zīj (No 816, A1) of Ulugh Beg.

Rasht Public Library

A 1059 Predictions of Stars (Aḥkām-i nujūm) P.

P 637 Sand [Divination], Astrolabe, and Number (Raml wa asṭurlāb wa `adad).

Majami` 71/5 Complete Treatise on Operations with the Sine Quadrant (Risāla dar `amal bi'l-rub` al-mujayyab mushtamila) P.

Majami` 71/7 On Determinig the Qibla (Dar ma`rifat-i Qibla) P.

Majami` 71/8 On Proofs of the Science of Lines of Astrolabe (Dar bayān-i `ilm-i khuṭūṭ-i asṭurlāb) P = Hyderabad (riyad. 533).

Majami` 71/12 On the Astrolabe and the Knowledge of the Quadrant (Dar asṭurlāb wa ma`rifat-i rub`) P.

Majami` 71/13 On Operations with the Almucantar Quadrant (Fī'l-`amal bi'l-rub` al-mu-qanṭarāt).

Rayy `Abd al-`Azim Library

238/2 Treatise on Knowledge of the Calendar (Risāla dar ma`rifat-i taqwīm) P.

238/4 Arithmetics (Ḥisāb).

Shiraz Shahchirag Library

676/1 Treatise on Knowledge of the Globe (Risāla dar ma`rifat-i kura) P.

Tabriz Milli – National Library

93/2 Terms of Iskandar Ring (Iṣṭilāḥāt-i ḥalqa-yi Iskandarī) P.

232, 233 Linear Calendar (Taqwīm-i khaṭṭī) P.

332/4 Twenty Chapters on the Calendar (Bīst bāb dar taqwīm) P.

3642 Jumal Arithmetic and Sexagesimal Table (Ḥisāb-i jumal u jadwal-i sittīnī) P = Tehran (Malik 3207/5).

Tehran Dihkhuda Library

20/4 Weights and Magnitudes (Awzān wa maqādīr).

55/3 Arithmetic of Astronomers (Ḥisāb-i ahl-i tanjīm) P.

270 Treatise on the Knowledge of the Astrolabe (Risāla dar ma`rifat-i asṭurlāb) P.

283/1 Visibility of the Crescent (Ruy'a hilāl).

289 Mysteries of Stars (Asrār al-nujūm).

Tehran Mahdawi Library

281/14 Selected from Heights of Desired on Numerical Magic Squares (Muntakhab-i kunh al-murād fī wafq al-a`dād) P.

281/21 Finger of Reckoning (Angusht-i shumārī) P.
Treatise on finger arithmetic.

Tehran Majlis Library

1006/1, 3186/2	Commentary on "Thirty Chapters" (Sharḥ-i Sī faṣl) P.
	Commentary on the work (No 606, A16) of al-Ṭūsī.
131/2, 2418/2,3	Treatise on Siyaq (Risāla dar siyāq) P.
147/2	Selected for Sanjar (Ikhtiyārāt-i Sanjarī) P.
	The treatise was written by the order of Seljukid Sultan Sanjar (1097-1157).
164-165	Improvement on Commentaries on "Memoir" (al-Takmila fī sharḥ al-Tadhkira).
	Commentary on the work (No 606, A10) of al-Ṭūsī.
176, 1804/1, 3951/1	Qibla (Qibla).
181, 1918/15, 2425/1, 4829/6	Zīj (Zīj).
206/2, 640/9, 2370/4, 2373/1, 2461/1, 2945/2, 5094/3	Arithmetics (Ḥisāb).
2128	Gift to Kings (Tuḥfat al-mulūk).
2134, 5144	Correction of the Book on Explanation of Treatise (Tanqīḥ-i maqāla dar tawḍīḥ-i risāla) P = Malik 492/9.
2449/8, 3117/2	Tables of Stars (Jadwalhā-yi nujūmī) P.
2466/1	Commentary on "Twenty Chapters on the Astrolabe" (Sharḥ-i Bīst bāb dar asṭurlāb) P.
	Commentary on the work (No 606, A14) of al-Ṭūsī.
2745/6	Balance of Magnitudes (Mīzān al-maqādīr).
4829/7	Treatise on Solar and Lunar Eclipses (Risāla dar khusūf u kusūf) P.
4911	Treatise on the Construction of Astrolabe (Risāla dar ṣan`at-i asṭurlāb) P.
5094/4	Arithmetic on Fractions of Tasuj and Dinar (Ḥisāb-i kusūr-i tasūj u dīnār) P.
5373/5, 5855/8	Arithmetic of Multiplication and Division (Ḥisāb-i ḍarb u qismat) P.
5389/10	Treatise on Arithmetic (Risāla dar arithmāṭīqī) P.

Tehran Malik Library

492/9, 2522/4, 3099, 3251, 3287, 5445, 6161/1, 6293/3	
	Correction of the Book on Explanation of Treatise (Tanqīḥ-i maqāla dar tawḍīḥ-i risāla) P = Tehran (Majlis 2134).
	Commentary on the work (No 845, A1) of al-Qushjī.
3207/5	Jumal Arithmetoic and Sexagesimal Table (Ḥisāb-i jumal u jadwal-i sittīnī) P.
	Treatise on literal numeration and its application in sexagesimal arithmetic.
3224/2, 6317/1	Arithmetic (Ḥisāb).
5750	Movement of Loads (Jarr al-athqāl).
5799/5	Numbers of Magic Square (A`dād-i wafq) P.
6188/21	The Ray (Shu`ā`).
6193/6	The Boat-Shaped Astrolabe (Asṭurlāb zawraqī).
6267/3	Gift of Astrologers (Tuḥfat al-munajjimīn).

Tehran Milli – National Library

43/2, 588/2	Arithmetic (Ḥisāb).
782/2	Treatise on the Knowledge of the Meridian Line and Qibla (Risāla dar ma`rifat-i khaṭṭ-i niṣf al- nahār u Qibla) P.

Tehran Mu`tamid Library

117/4	Zīj (Zīj).
120/18	Five Books on Figure Called [Figure of] Secants (Maqālāt khamsa fī'l-shakl al-ma`rūf bi'l-qaṭṭā`) = the work (No 606, M13) of al-Ṭūsī?
124	Treatise on Zīj (Risāla dar zīj) P.
215/4	Proof of [the Rule of] Two Errors (al-Burhān `alā'l-khaṭa'ayn).
Unknown call no.	Geometric Problems Called "Muhdat", that is Premises for Algebraical Problems Obtained from Geometry (Masā'il handasiyya mutarjama bi'l-Muhdāt wa-hiya muqaddimāt li-masāil jabriyya ustukhrijat bi'l-handasa) = Mashhad (5258/3).

Tehran Senat Library

7572/4	Treatise on Bissextile Years (Risāla dar sālhā-yi kabīsa) P.

Tehran Sipahsalar Library

54	Conjunctions of Planets (Ittiṣālāt-i sitārān) P.
109	Difference of Lines of Drawing (Ikhtilāf-i khuṭūṭ al-ashkāl) P.
	Treatise on various theories on the orbit of planet Mercury.
140, 631/3	Forty (Arba'īn) = Forty Questions (Chihil suāl) P.
145	Altitude (Irtifā')
165	Causes [of Operations] of Geometers (Asbāb-i muhandisīn) P.
261	Operations of Timekeeping by the Sine Quadrant (A'māl al-awqāt bi'l-rub' al-mujayyab).
267	Aims of Euclid's Books of "Elements" (Aghrāḍ maqālāt Uṣūl Uqlīdis) = Istanbul (SM AS 2713/3).
555/2	(Sharḥ-i Ḥālāt-i raṣad) P.
558/2	Three Uses (Se fāida) P.
	Book in 3 chapters: 1) on Muslim calendar, 2) on arc and chord, 3) on the sine quadrant on the back of astrolabe.
594, 712/2	Balance of Wisdom (Tarāzū-yi ḥikmat) P.
	Persian translation of the works (No 420, Me1) of al-Khayyām or (No 476, Me1) of al-Khāzinī.
622, 683	Mean Equation of the Moon (Ta'dīl-i mu'addal-i qamar) P.
668	Projection onto a Plane (Tasṭīḥ).
690	Aims of the Books of Euclid (Aghrāḍ maqālāt Uqlīdis) = Istanbul (SM AS 2413/3, Fatih 3383/6, Kılıç 675/4).
715/1, 899-901	Movement of Loads (Jarr al-athqāl) = Tehran (Malik 5750).
874/3, 6465/2	Weights and Magnitudes (Awzān wa maqādir).
895	Sexagesimal Table (Jadwal-i sittīn) P.
916	Table of Determining the Year (Jadwal ma'rifat al-sana).
1032, 7416/2	Forty Sections (Chahil faṣl) P.
	Astronomical treatise.
1071	Comments on Explanation of Propositions (Ḥāshiya-yi tawḍīḥ al-ash-kāl) P.
	Commentary on the work (No 606, M1) of al-Ṭūsī and its revision (No 668, E1) by al-Shirāzī.
1143-1147	Super-commentary on commentary on "Compendium" (Ḥāshiya-yi Sharḥ-i Mulakhkhaṣ) P.
	Super-commentary on commentary (No 808, A1) by al-Rumi on the work (No 547, A1) of Jaghmīnī.
1271, 1272	Treatise on Arithmetic (Risāla dar ḥisāb) P.
1273	Treatise on Arithmatic (Risāla fi'l-ḥisāb).
1274, 7416/3	Arithmatic (Ḥisāb).
1322	Book of Mechanics (Kitāb al-ḥiyal).
1323	Treatise on Mechanics (Risāla dar ḥiyal) P.
1324	Book on Mechanics (Maqāla fi'l-ḥiyal).
1386	Indian Circle and Horary Instruments (Dāira-yi hindiyya wa ālāt-i sā'āt) P.
7549/1	Arithmetic of Multiplication and Division (Ḥisāb-i ḍarb u qismat) P.

Tehran University Library

261	Mean Equation of the Moon (Ta'dīl-i mu'addal-i qamar) P = Tehran (Sipahsalar 622, 683).
302, 928	Foundation of Arithmetic (Qawām al-ḥisāb).
303/2, 889, 4525	Commentary on "Thirty Chapters" (Sharḥ-i Sī faṣl) P.
	Commentary on the work (No 606, A16) of al-Ṭūsī.
494, 891, 4820	Zīj (Zīj).
723/3	Treatise on Solar and Lunar Eclipses (Risāla dar khusūf u kusūf) P.

826	Treatise on the Altitude of the Sun and Stars (Risāla-yi irtifā`-i āftāb u sitāragān) P.
830/2	Plane Astrolabe (Asṭurlāb-i musaṭṭaḥ) P.
833/1	Treatise on Operations of Multiplication (Risāla fī a`māl al-ḍarb).
838	Sufficient Proof (Burhān al-kifāya) P.
839	Joy of Return (Bahja al-rawāḥ) P.
842	Fifty Chapters on the Knowledge of Astrolabe (Panjāh bāb dar shinākhtan-i asṭur-lāb) P.
853	Quadrature of Circle (Tarbī` al-dāira).
859	Explanation of Darkness (Tashrīḥ al-ẓulm).
874	Algebra and Almucabala (Jabr u muqābala) P.
881/1	Comments on the "Essence of Arithmetic" (Ḥāshiya <`alā> Khulāṣat al-ḥisāb).
	Commentary on the work (No 1058, M1) of al-`Āmilī.
881/2	Super-commentary on commentary on "Compendium" (Ḥāshiya sharḥ Mulakhkhaṣ).
	Super-commentary on a commentary on the work (No 547, A1) of al-Jaghmīnī.
887	Treatise on Arithmetic (Risāla dar ḥisab) P.
889	Treatise on Multiplication and Division (Risāla dar ḍarb u qismat) P.
906	Commentary on "Memoir" (Sharḥ al-Tadhkira).
	Probably commentary on the work (No 606, A10) of al-Ṭūsī.
911	Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb).
	Commentary on the work (No 1058, M1) of al-`Āmilī.
913	Explanation of the Sine Quadrant (Sharḥ al-rub` al-mujayyab).
916	Commentary on "Thirty Chapters" (Sharḥ Sī faṣl).
	Commentary on the work (No 606, A16) of al-Ṭūsī.
917	Commentary on "Compendium" (Sharḥ al-Mulakhkhaṣ).
	Probably commentary on the work (No 547, A1) of al-Jaghmīnī.
919	Commentary on the "Mirror" of al-Qushji (Sharḥ-i Mir`āt-i Qushjī).
	Super-commentary on Turkish commentary on the work (No 845, A2) of al-Qushjī, Istanbul (SM Yahya 280).
920	Tympanum of Astrolabe (al-Ṣafīḥa fī'l-asṭurlāb).
923	Selected from Arithmetic (`Uyūn al-ḥisāb).
930	Book on Stars (Kitāb fī'l-nujūm).
931	The Generosity of Pearl (Karāma durra).
935	Selected from "Proof of Sufficient" (Guzīda-yi Burhān al-kifāya) P.
	Probably extract from the works (No 490, A1) of al-Bakrī or (No 574, A1) of al-Bursawī.
944/5, 6	Finger of Reckoning (Angusht-i shumārī) P = Tehran (Mahdawi 282/21).
950/1	Measure of Hours (Mi`yār al-sā`āt) P.
950/2	Selected from "New Guragan Zīj" (Muntakhab-i Zīj-i jadīd-i Guragānī) P.
	Extract from zīj (No 816, A1) of Ulugh Beg.
950/3	Visibility of the Crescent (Ruy'at-i hilāl) P.
957/1	Positions of Fixed [Stars] (Mawāḍi`-i thawābit) P.
957/2	Composed Ratio (Nisba mu'allafa).
1542/2	Introduction [to Astronomy] in Verses (Madkhal manẓūm).
1751/4	Book on Determining the Proportion of Six Numbers (Maqāla fī istikhrāj tanāsub al-a`dād al-sitta).
1751/5	Problem from one of Archimedes' Books (Mas'ala min kitāb Arshimīdis).
1751/9	Useful on Ratio (Fā'ida fī'l-nisba).
1947/3	Book of Reckoning on Inheritance (Kitāb ḥisāb al-farāiḍ).
1959	Book on Algebra and Almucabala (Maqāla fī'l-jabr wa'l-muqābala).
1971/3	Treatise on Knowledge of the Azimuth of Qibla (Risāla fī ma`rifat samt al-Qibla).
1971/4	Section on the Use of Astrolabe (Faṣl fī isti`māl al-asṭurlāb).
1997/4	Motion of the Seven Planets (Ḥarakat-i sekkīz yuldūz) T.
2092/2	Astrolabe of Horizons (Asṭurlāb āfāqī).
2092/5	Measurement (al-Misāḥa).

2092/6 Useful on Irrational Numbers (Fā'ida dar a`dād-i aṣamm) P.

2160/2 Knowledge of the Calendar and the Astrolabe (Ma`rifat-i taqwīm u asṭurlāb) P.

2160/3, 3382/8, 3511/5, 3821, 4390/2 Treatise on Knowledge of Calendar (Risāla dar ma`rifat-i taqwīm) P.

2160/7 Science of Euclid (`Ilm-i Uqlīdis) P.

2160/9, 4722/2 Arithmetic (Ḥisāb).

2480/4, 2788/4 Treatise on Construction of the Astrolabe (Risāla dar ṣan`at-i asṭurlāb) P.

2523/3 Gift of Kings (Tuḥfat al-mulūk).

3337/8, 3819/4 Qibla (Qibla).

3337/11 Treatise on Algebra and Almucabala (Risāla dar jabr u muqābala) P.

3383/3 Mysteries of Stars (Asrār al-nujūm).

4258 Comments on "Exposition of Elements" (Ḥāshiya <`alā> Taḥrīr al-Uṣūl).
Commentary on the work (No 606, M1) of al-Ṭūsī.

4409/3 Treatise on Arithmetic, Measurement, Algebra, Almucabala, and [Rule of] Two Errors (Risāla fī'l-ḥisāb wa'l-misāḥa wa'l-jabr wa'l-muqābala wa'l-khaṭa'ayn).

4883/2 Determining the Limit of Equation of the Moon (Istikhrāj-i ghāyat-i ta`dīl-i qamar) P.

4883/3 Determining the Latitude of Climate of Observation (Istikhrāj-i `arḍ-i iqlīm-i ru'yat) P.

4888/5 Treatise on Arithmetic (Risāla dar arithmātiqī) P.

5182 Question and Answer of the King of Byzantine and the King's Daughter to King of `Iraq (Pursish u pāsukh-i pādshāh-i Rūm u dukhtar-i pādshāh ba pādshāh-i `Irāq) P.

Adab. 92/3 Treatise on the Knowledge of Astrolabe (Risāla dar ma`rifat-i asṭurlāb) P.

Adab. 107/3 Gardens of Minutes (Ḥadā'iq al-daqā'iq).
Description of the manucript: Munzawi [1] (161).

Adab. 197/1 Movement of Loads (Jarr al-athqāl) P.

Adab. 328/8 Instruments for Determining Hours (Alāt-i ma`rifat-i sā`āt) P.

Adab. 360/5 Gift to Kings (Tuḥfat al-mulūk).

Adab. 378 Zīj (Zīj).

Huquq 217/8 Arithmetic (Ḥisāb).

Ilah. 46/1 Treatise on arithmetics (Risāla dar arismātiqī) P –

Ilah. 99/7 Treatise on Siyaq (Risāla dar siyāq) P.

Ilah. 134 Lamp of Arithmetic (Miṣbāḥ al-ḥisāb).

Ilah. 185/3 Great Circles (Dawā'ir `iẓām).

Ilah. 301/2 [Treatise for] Minds on Arithmetics (Lubāb al-ḥisāb).

Ilah. 387/5 Treatise on the Knowledge of Astrolabe (Risāla dar ma`rifat-i asṭurlāb) P.

Mishkat. Commentary on "Exposition" (Tafsīr al-Taḥrīr).
Commentary on the work (No 606, M1) of al-Ṭūsī.

Mishkat. Explanation of "Memoir" (Tawḍīḥ al-Tadhkira).
Commentary on the work (No 606, A10) of al-Ṭūsī.

IRAQ

Baghdad Library of Waqfs

2963 Treatise on the Science of Timekeeping (Risāla fī `ilm al-mīqāt).

2966 Zīj on Celestial Spheres (Zīj fī'l-falak).

5485/2,3 Treatise on Geometry (Risāla dar handasa) P.

Sup. 323 Treatise on the Astrolabe (Risāla fī'l-asṭurlāb).

Sup. 326 Treatise on the Science of Stars (Risāla fī `ilm al-nujūm) P.

Sup. 327 Treatise on Ascensions and Stars (Risāla fī'l-maṭāli wa'l-nujūm).

Sup. 328 Treatise on the Science of Stars (Risāla fī `ilm al-nujūm) T.

Sup. 330 Concise [Treatise] on the Knowledge of Astrolabe (Mukhtaṣar <fī> ma`rifat al-asṭurlāb).

Sup. 331 On the Science on Stars and its Reckoning (Fī `ilm al-nujūm wa ḥisābihī).

Sup. 340 Treatise of Knowledge of the Hidden [Things] (Risāla fī ma`rifat al-maghībāt).

Baghdad Institute of Islamic Research

91/1	Persian Treatise on the Science of Arithmetic (Risāla fī `ilm al-ḥisāb bi'l-fārisiyya) P.
91/2	Treatise on Digits, Weights, and Measures (Risāla al-`uqūd wa'l-mawāzīn wa'l-makāyīl).

Baghdad Library of Ya`qub Sarkis

114	Arithmetic in the Science of Divination on any Figure (al-Arithmāṭiqī fī `ilm al-jafr ayy raqam).
117	Book on Astrology (Kitāb fī'l-tanjīm).
118	Book on the Science of Celestial Spheres (Kitāb fī `ilm al-falak).
119/1	Book on the Knowledge of Months and Crescents (Kitāb fī ma`rifat al-ashhur wa'l-ahilla).
119/2	Treatise on the Knowledge of Days of the Year and in which day [Every] Month Begins (Risāla fī ma`rifat ayyām al-sana wa fī ayy yawm al-shahr min kull shahr).
119/3	Treatise on the Knowledge in which day the Months Begin (Risāla fī ma`rifat ghurrat al-shahr fī ayy yawm hiya).
119/4	Astronomical Result and Operations with the Circle of Solar Year (Natīja falakiyya wa a`māl dāirat al-'l-sana al-shamsiyya).
119/5	Treatise on Coptic and Roman Names of Months (Risāla fī asmā' shuhūr al-Qibṭ wa'l-Rūm).
119/8	Treatise on the Beginnings of Roman Months (Risāla fī dukhūl al-shuhūr al-Rūmiyya).
120/1	Concise Commentary Called [Commentary on] "Thirty Chapters on Calendar" (Sharḥ al-mukhtaṣar al-mawsūm Sī faṣl fī'l-taqwīm). Commentary on the work (No 606, A16) of al-Ṭūsī.
120/2	On Names of Zodiacal Signs (Fī asmā al-burūj).
120/3	Concise [Treatise] on the Almucantar Quadrant (Mukhtaṣar fī'l-rub` al-muqanṭar).

Mosul Library of Waqfs

6	Treatise on Arithmetic (Risāla fī'l-ḥisāb).

Mosul Ahmadiyya Mosque

302	Treatise on Algebra (Risāla fī'l-jabr).

Mosul Jami` Mosque

132/1	Treatise on the Knowledge of Calendar (Risāla dar ma`rifat-i taqwīm) P.

Mosul Diwaji Library

19	Treatise on the Astrolabe (Risāla fī'l-asṭurlāb).

Mosul Hajiyat Library

85/2, 116/2	Arithmetic (Ḥisāb).
116/4	Treatise on the Investigation of Angle (Risāla dar taḥqīq-i zāwiya) P.
144	Treatise on Arithmetic and Change (Risāla fī ḥisāb wa'l-ṣarf).
302	Commentary on "Astronomy" of al-Qushjī (Sharḥ-i Hay'at-i Qūshjī) P. Commentary on the work (No 845, A1) of al-Qushjī.

Kazimiya Library of Husayn Mahfuz

42	Book on Stars (Kitāb fī'l-nujūm).
43	Book on Stars and Planets (Kitāb fī'l-nujūm wa'l-kawākib).
235	Concise [Treatise] on the Knowledge of Calendar (Mukhtaṣar fī ma`rifat al-taqwīm).

IRELAND

Dublin Library of Trinity College

3652/10	On Drawing Lines from the End of the Diameter of a Circle to the Perpendicular dropped on the Line of Diameter (Fī ikhrāj al-khuṭūṭ min ṭaraf quṭr al-dā'ira ila'l-`amūd al-wāqi` `alā khaṭṭ al-quṭr).

Dublin Chester Beatty Library

5254	Treatise on Movements of the Sun and the Moon (Risāla fī ḥarakāt al-nayyirayn).

ISRAEL

Jerusalem National and University Library

68	Abridgement of the Science of Arithmetic (Mukhtaṣar `ilm al-ḥisāb).
111, 363	[Arithmetical Treatise].
152, 153	[Astronomical Tables] P.
169, 175	[Astronomical treatise].
205	A Lot on the Science of Arithmetic (al-Ṭuffāḥa fī `ilm al-misāha) = (No 584, M5) of Ismail ibn Fallūs.
212, 237	[Astronomical tables].
Yehuda 334/1	Abridgemet [of Treatise] Called "Twenty Chapters on Astrolabe" (al-Mukhtaṣar al-ma`rūf Bīst bāb fi'l-asṭurlāb) P. Abridgement of the work (No 606, A14) of al-Ṭūsī.
Yehuda 334/2	Sufficient Introduction to the Science of Projecting onto Plane (al-Muqaddima al-kāfiyya fī `ilm al-tasṭīḥ).
Yehuda 334/6	Commentary on Poem of Abū Zayd `Abd al-Raḥmān ibn Sheikh Abī Muḥammad `Abd al-Qādir al-Fāsī on the Science of Astronomical Instrument Called Astrolabe (Sharḥ manẓūmat Abī Zayd `Abd al-Raḥmān ibn Sheikh Abī Muḥammad `Abd al-Qādir al-Fāsī fī `ilm al-āla al-nujūmiyya al-ma`rūfa bi'l-asṭurlāb). Commentary on the work (No 1207, A2) of al-Fāsī.
Yehuda 456	Readiness of the Reckoner and Support of Reckoning (`Uddat al-ḥāsib wa `umdat al-ḥisāb). Commentary on the work of Ibn al-Hā'im (No 783).
Yehuda 831	Treatise on Operations with the Northern Truncated Quadrant (Risāla fi'l-`amal bi'l-rub` al-maqṭū` al-shimālī).

ITALY

Florence Library of Lorenzo Medici

281	[Tables of Motion of the Sun].
282/9 (new 152/9)	Book on Automotive Mills, Disks, and Wheels (Kitāb al-dawālīb wa'l-arḥā wa'l-dawā'ir al-mutaḥarrika [bi-]dhātihā). Description of the manuscript: Sabra [19] (282).
282/11 (new 152/11)	Speech on Premises of Preparation to Drawing [Conic] Sections on Plane by Method of Art (Kalām fī tawṭi'at muqaddimāt li `amal al-quṭū` `alā saṭḥ mā bi-ṭarīq ṣinā`ī). Description of the manuscript: Sabra [19] (282-283).
285	[Treatise on Astronomy and Astrology].
291	[Astronomical Treatise]. Book in 35 chapters.
323	[Treatise on the Astrolabe].

Rome Vatican Library

494/7	Concise [Treatise] on Operations with the Astrolabe (Mukhtaṣar fi'l-`amal bi'l-asṭurlāb).
875	Treatise on the Astrolabe (al-Risāla fi'l-asṭurlāb).
878	Comprehensive Treatise on the Astrolabe (Risāla fi'l-asṭurlāb mushtamila). Book in 60 chapters.

879	Treatise on Nature (Kitāb ṭabī`iyāt).
1139/7	Book on Indian Number and its Operations (Kitāb fi'l-`adad al-hindī wa a`mālihi).
Barb. 46/4	How is the Astrolabe Checked (Bima yukhtabaru al-asṭurlāb).
Borg. 3/13	Poem on Calendar Reckoning of Byzantines (Urjūza fi'l-ḥisāba al-Rūmiyya).
Borg. 91/2	[Treatise on Construction of the Sundial].
Borg. 217/4	Construction of the Indian Circle (Waḍ` al-dāira al-hindiyya).
Borg. 217/4a	Operations with the [Instrument] which has Horizons (al-`Amal bi-dhāt al-āfāk).
Borg. 969/3	Knowledge of the Solar Year (Ma`rifat al-sana al-shamsiyya).
Sbath 48/5	Introduction to the Science of Celestial Spheres (Madkhal ilā `ilm al-falak).

KAZAKHSTAN

Alma-Ata (Alma-ata) State Library

3982-47	Geometry (Handasa).
4020-47	Arithmetic (Ḥisāb).

LEBANON

Beirut University of St.Joseph

187	Commentary on ["Compendium"] of al-Jaghmīnī on Astronomy (Sharḥ al-Jaghmini fi'l-hay'a) . Commentary on the work (No 547, A1) of al-Jaghmīnī. Description of the manuscript: Cheikho [1] (267)).
194	Treatise on the Knowledge of Determining Prayer times (Risāla fi ma`rifat istikhrāj awqāt al-ṣalāt).
199	Astronomical Collection (Majmū`a falakiyya). Description of the manuscript: Cheikho [1] (273-274).
201	Astronomical Tables (Jadāwil falakiyya). Tables of the Motion of the Sun, the Moon, and the Planets.
202	Annual Calendar (Taqwīm sanawī).
203	Turkish Calendar (Taqwīm turkī).
207	Treatise on the Almucantar Quadrant (Risāla fi'l-rub` al-mujayyab). Description of the msnuscript: Cheikho [1] (278-279). Book in 10 chapters.
234	Commentary on "Delight of Observers on the Science of Ghubar'" (Sharḥ Nuzhat al-nuẓẓār fi `ilm al-ghubār). Commentary on the work (No 783, M7) of Ibn al-Hā'im.
238	Sufficient Treatise on the Science of Arithmetic (Risāla kāfiya fi `ilm al-ḥisāb). Description of the manuscript: Cheikho [1] (297). Book in 10 chapters.
241	Arithmetic, Algebra, and Geometry (Ḥisāb wa jabr wa Handasa).

LIBYA

Tripoli Library of Waqfs

T 25/14	Treatise on Operations with the Globe (Risāla fi'l-`amal bi'l-kura).
T 26/1	Commentary on [Work] of Kushyar on the Celestial Sphere (Sharḥ Kūshyār fi'l-falak). Commentary on a work of Kushyar ibn Labban (No 302).
U 1101/4	Commentary on "Folios" of al-Māridīnī on Prayer times (Sharḥ Waraqāt al-Māridīnī fi awqāt al-ṣalāt). Commentary on the work (No 873, A37) of al-Māridīnī.
U	Sufficient for the Student on the Science on Rises and Sets (Kifāya al-ṭālib fi `ilm al-ṭāli` wa'l-gharib).
U 1178/2	Collection of Astronomical Tables (Majmū` jadāwil falakiyya).

U 1181	Commentary on the Treatise of Jamāl al-Dīn al-Māridīnī (Sharḥ risāla Jamāl al-Dīn al-Māridīnī).
	Commentary on a treatise of al-Māridīnī (No 873).
U 1189/1	Introduction of Salvation in Commentary on "Sapphires" (Fatḥ al-mughīth fī sharḥ al-Yawāqīt).

MOROCCO

Fas Library Zawiya

1c	Arguments and Tables (Ḥiṣaṣ wa jadāwil).
	Tables of the Motion of Planets.
2b	Tables of Equation [of the Sun] (Jadāwil fī'l-ta'dīl).
2c	Speech on Motions of the Sun (Kalām 'alā ḥarakāt al-shams).
2d	Speech on Pleiades (Kalām fī'l-Thurayyā).
2g	Work on the Displacement of Brilliant [Stars] from the Science of Timekeeping (Ta'līf fī tarḥīl al-durārī ilā ghayr dhālika mimmā huwa 'ilm al-tawqīt).
4c	Zījes (Azyāj).
4e	Treatise on Tympanum al-Zarqala (Risāla 'alā'l-ṣafīḥa al-zarqāliyya).
5d	Treatise on Collecting the Required on the Sine Quadrant (Risāla muḥṣilat al-maṭlūb fī rub' al-juyūb).
5h	Well-bred Pearls on the Sine Quadrant (Lu'lu' al-muhadhdhab fī'l-rub' al-mujayyab).
5i	Summary of Notes on what is Related to the Universal Tympanum (al-Nubdha al-lāmi'a fīmā yata'allaq bi'l-ṣafīḥa al-jāmi'a).
5j	Pearl Planet on the Knowledge of Spherical Astrolabe (al-Kawkab al-durrī fī ma'rifat al-asṭurlāb al-kurī).
5k	Explanation of the Indication on Knowledge of the Azimuth of Qibla and others (Iḍā ḥ al-adilla fī ma'rifat samt al-Qibla wa ghayr dhālika).
9d	Treatise on the Almucantar Quadrant (Risāla fī'l-rub' al-muqanṭarāt).
9i	Description of Drawing Sundials (Ṣifat takhṭīṭ al-rukhāma).
9k	Treatise on Operations of Algebra and Measurement (Risāla fī a'māl al-jabriyya wa'l-misāḥiyya).
10b	Work on Timekeeping without Instrument (Ta'līf fī istikhrāj al-awqāt min ghayr āla).
10c	A Lot on Eras and Astronomical Operations (Shay' min al-tawārīkh wa'l-a'māl al-falakiyya).
10g	Speech on the Sun and the Moon (Kalām fī'l-nayyirayn).
12a	On Astrology (Fī'l-tanjīm).
13d	On Timekeeping (Fī ma'rifat al-awqāt).

Rabat General Library

2431	Speech on Binomials and what is Related to them from Explanations and Demonstrations on Illustrations and Examples (Kalām 'alā dhawāt al-asmā wa mā yattaṣilu bihā min al-sharḥ wa'l-bayān bi'l-ṣura wa'l-mathal).
2442	Work on Geometric Figures (Ta'līf fī'l-ashkāl al-handasiyya).
2444	Work on the Science on Mensuration of Areas (Ta'līf fī fann al-taksīr).
2446	Poem on Turning Fingers and Digits of Numbers (Manẓūma fī taṣārif al-aṣābi' wa 'uqd al-a'dād).
2514	Commentary on Treatise of Fath al-Din on Operations with the Sine [Quadrant] (Sharḥ 'alā'l-risāla al-Fatḥiyya fī'l-a'māl al-jaybiyya).
	Commentary on the treatise (No 873, A7) of Sibṭ al-Māridīnī.
2521	Commentary on Poem on Properties of [Lunar] Stations (Sharḥ 'alā Urjūza fī waṣf al-manazil).
	Commentary on poem (No 986, A1) of al-Zunūrī.

2527	Victory of the Science of Timekeeping in Commenting "Sapphires" (Fatḥ al-mawāqīt fī sharḥ al-Yawāqīt). Commentary on the work (No 1194, A4) of al-Dādāsī.

NIGERIA

Kaduna Jos Museum and Lugard Hall Library

173	Calculus of Stars (Ḥisāb al-najm).
234	[Astronomical Treatise].
750	On the Science of Celestial Spheres and Stars (Fī `ilm al-falak wa'l-nujūm).
868	On Astrology and Calculus [of Stars] (Fī'l-tanjīm wa'l-ḥisāb).
935	On the Science of Celestial Spheres (Fī `ilm al-falak).
944	Problems of Arithmetic (Masāil fi'l-ḥisāb).

THE NETHERLANDS

Leiden University Library

14/1b	[Poem on Arithmetic].
139/4	[Astronomical Tables].
168/11	[Solution of an Arithmetic Problem]
187a	[Fragment of an Astronomical Work].
187b/2	[Treatise on an Astronomical Instrument invented by `Umar ibn Sahlān al-Sāwī].
199/5	Problems of Algebra and Almucabala (Masāil al-jabr wa'l-muqābala).
468	Book of Treasure of Sapphires on Exhaustion of Timekeeping (Kitāb Kanz al-yawāqīt fī isti`āb al-mawāqīt).
678/2	Treatise on the Pole (al-Risāla al-quṭbiyya).
991/2	Rules for the Knowledge of the Azimuth of Qibla (Qawā`id fī ma`rifat samt al-Qibla).
992	On the Science of Astrolabe (Fī `ilm al-asṭurlāb).
1001/5	[Treatise on the Sine Quadrant].
1001/11	[Treatise on Lunar Stations].
1018	Section of Plane figures in Ratios of Apollonius (Qaṭ` al-suṭūḥ `alā nisab Abulūniyus). Research: GAS (V 54, VII 400) Solution of a problem of construction of a trapezium with three equal sides equivalent to an equation of 4[th] grade.
1021/1	Treatise on the Science on Celestial Sphere (Risāla fī `ilm al-falak).

PAKISTAN

Rawalpindi Ganjbakhsh Library

510/181	Six Operations of Arithmetic (A`māl sitta ḥisāb). Description of the manuscript: Tasbihi [1] (24-26).
510/259:2	Unicum of Arithmetic (Badī` al-ḥisāb). Description of the manuscript: Tasbihi [1] (417-418).

POLAND

Kraków University Library

2543/3	Poem on ó Motion of the Sun (Urjūza fī tarḥīl al-shams).

Warsaw University Library

117	[Textbook of Arithmetic].

Wroclaw University Library

145	(Asṭurlāb risālasī tarjumasī) T.

RUSSIA

Kazan University Library

4 Zīj (Zīj) P.

6 Treatise on Astronomy (Risāla fī'l-hay'a) P.

12 Treatise on the Science of Arithmetic (Risāla dar `ilm-i ḥisāb) P.

13 Treatise on Construction of the Northern Astrolabe (Risāla dar ṣan`at-i asṭurlāb shimālī) P.

14, 15 Concise {Book] on Calendar (Mukhtaṣar dar ma`rifat-i taqwīm) P.

23 Treatise on the Astrolabe (Risāla fī'l-asṭurlāb) P.

109 Explanation of "Explanation" (Tashrīḥ al-Tashrīḥ).
Commentary on the work (No 1058, A1) of al-`Āmilī.

213 Treatise on Arithmetic (Risāla <fī> al-ḥisāb) P.

531-536 [Bukhara Textbooks of Arithmetic in the Form of Rolls].

837 The Sine Quadrant in Zīj (Rub` al-mujayyab fī'l-zīj).

882 Reasoning on Equality of [Sum of' Angles in Triangle to Two Right [Angles] (Qawl fī tasāwī zawāyā al-muthallath li qā'imatayn).

1040 Treatise Related to Arithmetic (Risāla muta`alliqa bi'l-ḥisāb).

1069 Ascent of Lights on Astronomy (Ṭawāli` al-anwār fī'l-hay'a).

1072 Book on the Science on Hills and Astrolabe (Kitāb `ilm al-nabakāt wa'l-asṭurlāb).

1104 Treatise on Arithmetic (Risāla fī'l-ḥisāb).

1201 Correction of Arithmetic (Tanqīḥ al-ḥisāb).

1203 Treatise on Explanation of Terms of People of Measurement (Risāla fī bayān iṣṭilāḥāt ahl al-misāḥa).

2085 Introduction to Arithmetic (Muqaddimat al-hisāb).

2438/1 Treatise on Arithmetic (Risāla fī'l-ḥisāb).

2751 Conclusive Treatise (Risāla burhāniyya).
Probably coincides with the work (No 527, M3) of al-Sajawandī.

Mahachqala Institute of History, Language, and Literature

182/1 The Northern Astrolabe (al-Asṭurlāb al-shimālī).
Description of the manuscript: "Katalog" [1] (11).
Book in 15 sections plus introduction and conclusion.

185/3, 7 [Astronomical tables].

186/2 [Treatise on Determining Prayer times and the Azimuth of Qibla].

924/4 Treatise on Astronomy (Risāla fī'l-hay'a).

1923 Concise [Book] on the Science of Arithmetic (Mukhtaṣar fī `ilm al-ḥisāb).

1983/4 Comments on the "Essence of Arithmetic" (Ḥāshiya `alā Khulāṣat [al-ḥisāb]).
Commentary on the work (No 1058, M1) of al-`Āmilī.

1983/5 The Northern Astrolabe (al-Asṭurlāb al-shimālī).

2208 Book on Astronomy (Kitāb fī'l-hay'a).

2319 Book on Inheritance and other (Kitāb al-farā'iḍ wa ghayrihī).

Moscow State Library

87/1 Science on Arithmetic (`Ilm al-ḥisāb).

121 Treatise on Explanations of some Geometric Doctrines (Risāla fī bayān ba`ḍ `ulūm al-handasa).
Treatise in 3 hapters plus conclusion: 1) definition of principal geometric notions, 2) measuring distances to inaccessible objects, 3) measuring volumes necessary for mechanical engineers. Conclusion: on conic sections and their meaning for mechanics; in particular, on parabola as trajectory of flying missile.

222/2 Reasoning on Equality of [the Sum of] Three Angles in Triangle to Two Right [Angles] (Qawl tasāwī al-zawāyā al-thalātha li-qāimatayn li'l-muthallath).

Andronov	Garden of Arithmetic in Examples on Each Rule (Rawḍa al-ḥisāb fi amthila min kull bāb). Description of the manuscripr: Andropov and Sobirov [1] (8-9).

St. Petersburg Institute of Oriental Studies

A 265/6	Concise [Book] on the Knowledge of Astrolabe (Mukhtaṣar dar ma`rifat-i asṭur-lāb) P.
A 267/2	Treatise on Astronomy (Risāla dar hay'at) P.
A 682	Commentary on "Concise [Treatise] on Ephemerides" of al-Ṭūsī (Sharḥ-i Mukhtaṣar dar ma`rifat-i taqwīm li'l-Tūsī) P. Commentary on the work (No 606, A17) of al-Ṭūsī.
A 686	Treatise on Operations with the Astrolabe (Risāla al-`amal bi'l-asṭurlāb).
A 778, B 2192, 3516, 4541, C 1230, 2460	[Astronomical treatises] P.
A 842, 1031, B 3147, 3496, 4241, C 1417, 1464, 2242, 2250, 2348	[Mathematical treatises] P.
A 1005	Treatise on Tympanum (Risāla dar ṣafīha) P.
A 1453	Commentary on "Concise [Treatise] on the Knowledge of Ephemerides" (Sharḥ Mukhtaṣar fi ma`rifat al-taqwīm). Commentary on the work (No 606, A17) of al-Ṭūsī.
B 285	Proof of the Cause of Eclipses of the Moon (Dar bayān-i `illat-i khusūf al-qamar) P.
B 349	[Astronomical Treatise].
B 635	Seven Premises Necessary for the Knowledge of Rainbow (Muqaddimāt sab` yuḥtāju <ilayhā> fi ma`rifat qaws quzaḥ).
B 816	Mention on Lunar Stations, Events, and Seasons (Dhikr manāzil al-qamar wa'l-waqā'i` wa'l-mawāsim).
B 837/3	Knowledge of the Astrolabe (Ma`rifat-i asṭurlāb) P.
B 842/13	Wealth of Arithmetic (Ghaniyyat al-ḥisāb).
B 993/8	Treatise on Arithmetic (Risāla fi'l-ḥisāb).
B 996/2	Instructive Use in the Science on Celestial Sphere (Fā'ida mufīda fi `ilm al-falak).
B 996/4	Section on Equalities of Stars (Faṣl fi istiwā'āt al-nujūm).
B 1069/2	On Essence of the Science of Arithmetic (Fī māhiyat `ilm al-ḥisāb).
B 1172	Spherical Shapes of the Sun, Moon, Venus, and Mercury, and their Explanation (Ṣuwar aflāk al-shams wa'l-qamar wa'l-Zuhra wa `Uṭārid ma`a sharḥihā).
B 1264	Section on Determining the Surplus and Shortage of Midday Shadow (Faṣl fi ma`rifat al-zawāl wa ziyādat al-ẓill wa nuqṣānihī).
B 1296	Treatise in Operations with the Sine Quadrant (Risāla fi'l-`amal bi'l-rub` al-mujayyab).
B 1323/1	On the Cause of Particles of Matter and a Shape Visible in Pleiades (Fī sabab al-ajzā' al-māddiyya wa'l-hay'a al-maḥsūsa li'l-Thurayā).
B 1411	Information on Greater Accuracy of Hours at the End of [Line of] Sine in Qudrant (Muḥarrara fi taṣḥīḥ al-sā`a fi ṭaraf al-jayb min al-rub`).
B 1450/	Joy of Minds in the Science of Astrolabe (Bahjat al-albāb fi `ilm al-asṭurlāb).
B 1791	Syrian Collection – Introduction to the Science of Predictions of Stars (al-Jāmi` al-Sha'mī al-madkhal fi `ilm aḥkām al-nujūm).
B 2094/9	Comments on the Book of Sa`d al-Din al-Taftazani on Equality of Angles of Triangle (Ḥāshiya `alā maqāla Sa`d al-Dīn al-Taftazānī fi tasāwī al-zawāyā al-thalātha) Commentary on the work (No 772, M2) of al-Taftazānī.
B 2164	Concise Treatise on the Equality of Three Angles of Triangle (Sharḥ risāla fi tasāwī al-zawāyā al-thalāth li'l-Taftazānī). Commentary on the work (No 772, M2) of al-Taftazānī.
B 2192, 2565	Propositions of Substantiation (Ashkāl al-ta'sīs).
B 2695	Treatise on the Astrolabe (Risāla fi'l-asṭurlab).
B 2827	Third Section on Determining the First Base (al-faṣl al-thālith fi istikhrāj al-ḍil` al-awwal). Treatise on extraction of roots.

B 2833	Note from Geometry on the Equality of Corresponding and Interior and Exterior Alternate Angles (Nubdha min al-handasa fi'l-zawāyā al-mutajānisa wa'l-mutaqābila al-mutasāwiyya wa'l-mutabādila).
B 2878/1	Some Books from a Model Treatise on Arithmetic (Ba`ḍ maqālāt min risālat al-unmūdhaj fi'l-ḥsāb).
B 2999/2	Treatise on Arithmetic (Risāla fi'l-ḥisāb).
B 2999/3	Treatise on the Explanation of Terms of People of Measuring (Risāla fi bayān iṣṭilāḥāt ahl al-misaḥa) = Kazan (1203).
B 2999/6	Celestial Bodies in Ancient [Scientists] Notes on Marvels of Geometry (Ajrām samāwiyya fi'l-muqaddimīn. Nubadh min gharāib al-handasa).
B 2999/8	Treatise on the Leap Year and the Cause of its Difference from the Regular Year from which Shapes of Celestial Bodies and Rotation of Planets around the Sun follow (Risāla fi'l-sana al-kabīsa wa sabab farqihā `an al-sana al-basīṭa wa talihā ashkāl al-ajrām al-samāwiyya wa dawaran ḥawl al-shams sayyārātihā).
B 2999/10	Treatise on the Knowledge of Operations [of Timekeeping] by Night and Day (Risāla fi ma`rifat istikhrāj a`māl al-layl wa'l-nahār).
B 3051	Concise [Treatise] on the Astrolabe (Mukhtaṣar dar ma` rifat-i asṭurlāb) P.
B 3516	Gift to the Most Worthy on Explanation of [Lunar] Stations (Tuḥfat al-afāḍil fi sharḥ al-manāzil).
B 3519	Note from a Speech Related to Stars (Nubdha min al-kalām al-muta`alliq bi'l-nujūmāt).
B 3649	Treatise on the Astrolabe (Risāla fi'l-asṭurlāb).
B 3691/2	Treatise on Operations with the Sine Quadrant (Risāla fi'l-`amal bi'l-rub` al-mujayyab).
B 4077	Tables of Zodiacal Signs (Jadāwil al-burūj).
B 4214, 4246	Treatise on the Science of Astronomy (Risāla fi ilm al-hay'a).
C 612/3	The Regions of the World (Ḥudūd al-`ālam) P. Edition: Barthold [6a]. English translation: Minorsky [2].
C 1012/6	Comments and Closer Definitions to the Second Chapter of the "Essence of Arithmetic" (Ta`līqāt wa taḥqīqāt `alā'l-bāb al-thānī min Khulāṣat al-ḥisāb). Commentary on the work (No 1058, M1) of al-`Āmilī.
C 1330	Treatise on Algebra and Almuqabala (Risālat jabr wa muqābala).
C 2417/4	Treatise of Habib on Arithmetic (Risāla ḥabībiyya fi'l-ḥisāb).
D 347/1	Commentary on Treatise on Arithmetic (Sharḥ risāla fi'l-ḥisāb).
D 347/2	Treatise on Algebra and Almuqabala (Risāla fi'l-jabr wa'l-muqābala).
D 347/3	Treatise on Arithmetics (risāla fi'l-ḥisāb).
D 372	Book of Zij (Kitāb al-zīj).
D 487	On Principles of Numbers (Fī uṣūl al-`adad).
D 601	Essay on the Crescent of the most Auspicious Month (al-Qawl al-manshūr fi hilāl khayr al-shuhūr).

St. Petersburg National Library

127	Commentary on "Compendium" (Sharḥ al-Mulakhkhaṣ). Commentary on the work (No 547, A1) of al-Jaghmīnī.
130/2	[Arithmetical Treatise].
130/4	On Construction of the Sine Quadrant (Fī `amal rub` al-mujayyab).
130/5	Guide of Acting [by Astronomical Instruments] (Hudāya al-`āmil).
130/6	The Northern Astrolabe (al-Asṭurlāb al-shimālī).
133/2	Foreword to Commentary of al-Jaghmīnī (Dībācha-yi sharḥ-i Jaghmīnī) P. Commentary on treatise (No 547, A1) of al-Jaghmīnī.
315/[illegible]	Commentary on "Treatise of Conquest" (Sharḥ-i Risāla-yi Fatḥiyya) P. Commentary on the work (No 845, A2) of al-Kushji.
317/1	Concise [Treatise] on the Knowledge of Astrolabe (Mukhtaṣar dar ma`rifat-i asṭurlāb) P.
317/5	Concise [Treatise] on the Knowledge of Calendar (Mukhtaṣar dar ma`rifat-i taqwīm) P.
Khanykov 31/2	[Treatise on Arithmetic] P.

	Treatise in two books: 1) Arithmetic of integers and fractions, 2) Arithmetic of astronomers and measurement.
Khanykov 123	Commentary on "Memoir" (Sharḥ al-Tadhkira).
	Commentary on the work (No 606, A10) of al-Ṭūsī.
Khanykov 128/3	First Introduction for Minds on the Science of Arithmetic (Tabṣira ulā al-albāb fī `ilm al-ḥisāb).
Khanykov 129/2	Gift of Astrologers from Friend of Astrologers (Tuḥfat al-munajjimīn min anīs al-munajjimīn)
Khanykov 144/2	On the Art of Music (Fī ṣinā`at al-mūsīqā).
Khanykov 144/5	Commentary on the "Book of Spheres" of Menelaus (Sharḥ Kitāb al-ukar li-Manālāws).
Khanykov 144/10	Comments on the "Book of Spheres' of Theodosius (Ta`līqāt <`alā> Kitāb al-ukar li Thāwudhūsyūs).
Khanykov 144/11	Treatise on the Science of Optics and Mirrors (Risāla fī `ilm al-manāẓir wa'l-marāyā).
Khanykov 144/14	Treatise on Area of a Circle can be Equal to a Square [Bounded] by Straight Lines (Risāla fī anna saṭḥ al-dāira mumkin an yakūna musāwiyyan li murabba` mustaqīm al-khuṭūṭ).
ANS	Book of Tables for [Various] Horizons for Determining Degrees of the Moon on Ecliptic (Kitāb jadāwil āfāqiyya fī ma`rifat darajāt al-qamar fī'l-burūj).
PNS 371, 372	[Treatises on Arithmetics].
PNS 723, 724	[Astronomical Treatises].

St. Petersburg University Library

90/4	Third Treatise on Property of Arithmetic (al-Risāla al-thālitha fī kayfiyyat al-ḥisāb bi'l-takht).
90/7	Geometric Propositions (al-Ashkāl al-handasiyya).
393	Book of Zīj (Kitāb-i zīj) P.
406	Treatise on the Science of Arithmetic (Risāla dar `ilm-i ḥisāb) P.
1079	Memoir on the Science of Astronomy (Tadhkira fī `ilm al-hay'a).
1143	Treasury of Numbers (Kanz al-a`dād).

SAUDI ARABIA

Medina Library of Arif Hikmat Bey

[Commentary on the algebraic treaise of al-Khwarizmi] (No 41, M3) – Two manuscripts (GAS V 401).

SLOVAKIA

Bratislava University Library

299, 300	Treatise on the Astrolabe (Risāla fī asṭurlāb).
303, 304	Treatise on the Almucantar Quadrant (Risāla fī rub` al-muqanṭarāt).
305	Smart Treatise on Operations with the Globe (Risāla laṭīfa fī'l-`amal bi'l-kura).
307	[Treatise on Chronology and Astronomy].

SPAIN

Escorial Library of St.Laurentius Monastery

II 924/3	[Treatise on Lunar Stations and Calendar].
II 924/4	[Treatise on Lunar Stations].
II 924/5, 6	[Poem on Lunar Stations].
II 936/2	[Poem on Arithmetic].
	MAA (197) believes that the author of this work is Muḥammad ibn Qāsim al-Gharnaṭī; however this scholar is not the author, but the treatise is dedicated to him. Description of the manuscript: Derenbourg [7] (49).
II 955/2	Comments on the "Book of Introduction" of al-Kharaqi (Ta`līq `alā kitāb al-Tabṣira li'l-Kharaqī).
	Description of the manuscript: Derenbourg [7] (92).

	Commentary on the work (No 469, A2) of al-Kharaqī.
II 972/1	Memoir on Knowledge of Parts of Northern Astrolabe (Tadhkira fī ma'rifat ajzā' al-asṭurlāb al-shimālī).
	Description of the manuscript: Derenbourg [7] (121-122_.
II 972/5	[Treatise on the Use of Astrolabe].
II 972/6	[Geometric Treatise].
	Description of the manuscript: Derenbourg [7] (123-124).
II 972/6	[Astronomical Treatise].
	Description of the manuscript: Derenbourg [7] (124).

SWEDEN

Uppsala University Library

II 319	[Astronomical Treatise].
	Description of the manuscript: Zetterstéen [1] (250).

SYRIA

Damascus Library al-Zahiriyya

3077	Guide of the Student (Rushd al-ṭālib).
3087	Book on Algebra and Almucabala (Kitāb al-jabr wa'l-muqābala).
3089	Concise Guide for the Art of Ghubar (Mukhtaṣr al-murshida fī ṣinā'at al-ghubār).
3092	Discussion on a Collected Zīj (Mu'āmara ilā al-zīj al-majmū'a).
3098	Book Containing Treatises on Operations with the Crescent Quadrant (Kitāb mushtamil 'alā rasāil fī'l-'amal bi'l-rub' al-hilālī).
3105	Yemeni Sirius (al-Shi'rā al-yamaniyya) –
3110	Commentary on al-Jaghmīnī (Sharḥ al-Jaghmīnī).
	Commentary on the work (No 547, A1) of al-Jaghmīnī.
3111	More Accurate Operations with the Winged Quadrant (al-'Amal al-muṣaḥḥaḥ fī rub' al-mujannaḥ).
3112	Concise [Exposition of Astronomy] (Mukhtaṣar al-bārī').
4871	Construction of an Instrument for Measuring [Distances of] Fixed Stars ('Amal āla li-qiyās al-kawākib al-thābita)
7305/2	Mention on Lunar Stations (Dhikr manāzil al-qamar).

TAJIKISTAN

Dushanbe Institute of Oriental Studies

659, 1200	Arithmethic and Geometry (Ḫisāb wa handasa).
1279/3	Commentary on Inheritance (Sharḥ-i farāiḍ) P.
1298	Table of Hours (Jadwal-i sā'āt) P.
1611/1	Arithmetic and Geometry (Ḫisāb ham handasa) P.
2001	Chapter on the Knowledge of Stars (Bāb dar dānistan-i sitārahā) P.
2005	Ancient Science of Astronomy ('Ilm-i hay'at-i qadīm) P.
2219	Great Table (Jadwal-i 'aẓam) P.
	Roll 9 m by 23 cm.
2220	Four Operations of Arithmetic (Chahār 'amal-i ḥisāb) P.
	Roll 4 m 36 cm by 26.5 cm.
2474	Treatise on Sciences of Stars (Risāla fī'l-'ulūm al-nujūm).
2851/1	Arithmetic (Ḫisāb).
2851/2	Fragments from the Science of Stars (Pārchahā az 'ilm-i nujūm) P.
2851/5	Geometry (Handasa).
2851/8	Arithmetic (Ḫisāb).
2895	Mathematical Science ('Ilm-i riyāḍī) P.
3091/1	Science on Inheritance (Ta'līm-i farāiḍ) P.

Dushanbe Ferdowsi Library

270	Mathematics – Arithmetic (Riyāḍiyāt-i ḥisāb) P.
332/2	Science of Arithmetic (`Ilm-i ḥisāb).
932/1, 2043/1	Science on Inheritance (Ta`līm-i farāiḍ) P. = Dushanbe IOS 3091/1.
1618	Table for the Study Lunar Days (Jadwal-i iḍtiraāt-i ayām-i qamarī) P.
1722	The Universe (Kāinat).
1865	Problems of Arithmetic and Inheritance (Masā'il al-ḥisāb wa'l-faraid).
1930	Geometry (Handasa).

Dushanbe Institut-i Zabon u Adabiyot

34	Zīj (Zīj).
101/10, 125	Treatise on the Science of Arithmetic (Risāla dar `ilm-i ḥisāb) P.
202/2	Science of Astronomy (`Ilm-i hay'at) P.
202/3	Science of Arithmetic (`Ilm-i ḥisāb) P.
202/6	Science of Stars (`Ilm al-nujūm).
202/7	Rule of the Explanation of Declination [of the Sun] to Sunset (Qā`ida dar bayān-i zawāl gardīdan) P.
386/5, 1333, 1384	Collection of Marvels (Majma` al-gharā'ib).
Unnumbered	Table of Inheritance (Jadwal-i farāiḍ) P. Roll 11.8 m by 30 cm.

TUNISIA

Tunis Library Zaytuna

7810	[Abridgement of (No 654, A1) of al-Aslami]. Description of the manuscript: Samsó [5] (176-180).

TURKEY

Istanbul Atıf Efendi Library

1324	Guide for Determining the Qibla without Instruments (al-Hidāya fī ma`rifat al-Qibla bi lā ḥiyal).
1714	Collection of Treatises on Mathematical Sciences (Majmū`at rasāil min al-`ulūm al-riyāḍiyya).

Istanbul Beyazıd State Library

Veliyuddin 2319	Trisection of an Angle (Tathlīth al-zāwiya).
Veliyuddin 2320	Book on the Knowledge of Measuring Figures and Exposition of Euclid (Kitāb ma`rifat misāḥat al-ashkāl wa taḥrīr Uqlīdis).
Veliyuddin 2322	Commentary on the "Exposition of Euclid" by al-Ṭūsī (Sharḥ Taḥrīr Uqlīdis li'l-Ṭūsī.). Commentary on the work (No 606, M1) of al-Ṭūsī.
Veliyuddin 2327	Ephemerides according to Zījes (al-Taqwīm al-zījī).

Istanbul Köprülü Library

338	Super-commentary on Commentary of al-Jaghmīnī (Ḥāshiya `alā sharḥ al-Jaghmīnī). Comments on commentary (No 808, A1) by al-Rumi on the work (No 547, A1) of Jaghmīnī.
346	Treatise on Stars (Risāla fī'l-nujūm) T.
941/3	[Proof that for any Regular Polygon of a Circle with a Circumference Equal to the Perimeter of the Polygon is Greater than the Polygon, and the Polygon with the Greater Number of sides is Greater than a Polygon with smaller number of sides].

Istanbul Millet Library

Emiri 357	Book on Stars (Kitāb fī'l-nujūm).

Emiri 362	Concise [Book] on Arithmetic and Geometry (Mukhtaṣar fī `ilm al-ḥisāb wa'l-handasa).
Emiri 367	Figures of Siyaq (Arqām siyāqa).
Feyzulla 274	Positions of Stars (Mawāqi` al-nujūm).
Feyzulla 1365/2	[Treatise on Coptic Numeral System]. Photo-reproduction: Sesiano [15a] (60-63). Research: Sesiano [15a].

Istanbul Nuruosmaniye Library

2795/1	Book on Conjunctions of Planets and Change of World Years (Kitāb al-qirānāt wa taḥāwīl sinī al-`ālam). Description of the manuscript: SHIM (524-525).
2903	Tables of Surplus of Turn (Jadāwil faḍl al-dāir).
2904	Equinoctial Tables (Jadāwil I` tidāliyya).
2914	Calendar Tables (Jadāwil al-taqwīm).
2915	Treatise on the Astrolabe (Risālat al-asṭurlāb) T.
2931	Complements to Astronomy (Ziyāda al-hay'a).
2974	Joy of Pupils by Aims of Magic Squares (Bahja al-aḥdāq bi-maqāṣid al-awfāq).
2978	Book on Arithmetic (Kitāb fi'l-ḥisāb).
2982	Comments on Treatise of al-Sajawandi on Arithmetic (Ḥāshiya `alā risālat al-Sajāwandī fi'l-ḥisāb). Commentary on the work (No 527, M1) of al-Sajawandī.

Istanbul Süleymaniye Library

845	Commentary on "Propositions of Substantiation" of Shams [al-Dīn] al-Samarkandī (Sharḥ Ashkāl al-ta'sīs li Shams [al-Dīn] al-Samarkandī). Commentary on the work (No 655, M1) of al-Samarkandī.
AS 2576	Exhausted on Astronomy (al-istī`āb fi'l-hay'a).
AS 2583	[Introduction to "Almagest"]. Description of the manuscript: SHIM (523-524). The treatise was written for al-Qazwīnī (No 589).
AS 2594	Translaton of the treatise of al-Samarkandī on Sine (Tarjama-yi Risāla al-jayb) T.
AS 2596/2	Treatise on the Calendar (Risāla-yi taqwīm) P.
AS 2607	Super-commentary on commentary on al-Jaghmīnī (Ḥāshiya `alā sharḥ al-Jaghmīnī). Commentary on the work (No 547, A1) of al-Jaghmīnī.
AS 2609	Comments on the Science of Mathematics (al-Ḥawāshī fi'l-`ilm al-riyāḍī).
AS 2614	Fifth Treatise on Essence of Mathematical Sciences, that is, the Science of Astronomy (al-Risāla al-khāmisa min Khulāṣat al-`ulūm al-riyāḍiyya wa huwa `ilm al-hay'a). Description of the manuscript: SHIM (524). Treatise in 3 parts: 1) shape of the celestial bodies, 2) shape of the Earth, 3) distances and volumes of celestial bodies. The structure is close to treatise (No 668, A3) of al-Shīrāzī.
AS 2617/3 , 2672/4	[Treatise on the Astrolabe].
AS 2618	Treatise for Minds on the Astrolabe (Risālat al-albāb fi'l-asṭurlāb).
AS 2626	Treatise on the Equatorial Circle (Risāla dāira al-mu`addil).
AS 2627	Treatise on the Knowledge of Altitude [of Celestial Bodies] (Risāla fī ma`rifat al-irtifā`).
AS 2631	Treatise on the Globe with a Throne (Risāla fi'l-kura dhāt al-kursī).
AS 2632	Book on Astronomy (Kitāb fi'l-hay'a).
AS 2633	Book of Celestial Globe on Stars (Kitāb al-kura al-falakiyya fi'l-nujūm).
AS 2634	Treatise on the Quadrant of Circle (Risāla fī rub` al-dāira) T.
AS 2641	Commentary on Treatise "Twenty Chapters on the Astrolabe" (Sharḥ risāla-yi Bīst bāb dar asṭurlāb) P. Commentary on the work (No 606, A14) of al-Ṭūsī.
AS 2666	Persian Poem on Celestial Movements (al-Qaṣīdat al-fārisiyya fi'l-ḥarakāt al-samāwāt) P.
AS 2671/1	Book on Ascents of Planets, Zodiacal Signs and others (Kitāb fī maṭāli` al-kawakib wa'l-burūj wa ghayrihā).

AS 2671/9	Construction of the Astrolabe (`Amal al-asṭurlāb) Description of the manuscript: SHIM (525).
AS 2672/2	Book of Definitions (Kitāb al-ḥudūd). Description of the manuscript: GAS (VI 290). Treatise on astronomical definitions.
AS 2672/4 = TK 3327/5	[Treatise on the Astrolabe] P.
AS 2673/2	Concise on Sufficient on Operations with the Globe (Mukhtaṣar fī kifāyat al-`amal bi'l-kura). Description of the manuscript: SHIM (525-526). The works of Autolycus, Hero, Filon, Theon, and Qusta ibn Luqa (No 118) on rotation of the celestial sphere and the globe are mentioned.
AS 2676	Book on Burning Mirrors (Kitāb fī'l-marāya al-muḥriqa). Description of the manuscript: SHIM (527). The works of Archimedes, Anthemius, and `Utarid (No 233) are mentioned.
AS 2677	Commentary on "Twenty Chapters on the Astrolabe" Called "Measure of the Sun" (Sharḥ-i Bīst bāb dar asṭurlab musammā bi-Mi`yār-i āftāb) P. Commentary on the work (No 606, A14) of al-Ṭusī.
AS 2713/3 = Fatih 3387/2 = Kılıç 675/4	Aims of the Books of Euclid (Aghrāḍ maqālāt Uqlīdis) Commentary on Euclid's "Elements".
AS 2715	Sufficient on Measurement (al-iqnā` fī'l-misāha).
AS 2716	Commentary on Notable "Inheritance" by Explanation of Aims (Sharḥ Fara'id al-bahā'iyya bi Īḍā ḥ al-maqāṣid).
AS 2723	Gift in Arithmetic (al-Tuḥfa fī'l-ḥisāb).
AS 2737	Treatise of `Ala al-Din on Arithmetic Problems (al-Risāla al-`Alā'iyya fī'l-masāil al-ḥisābiyya).
AS 2740	Treatise on Geometry (Risāla fī'l-handasa) T.
AS 2742/3	Treatise on Meaning of the Tenth Book (Risāla fī ma`nā al-maqāla al-`āshira). Treatise in 18 propositions, commentary on Book X of Euclid's "Elements".
AS 2761/4	Treatise on Property of Drawing Sine Quadrants (Risāla fī kayfiyyat takhṭīṭ al-rub` al-muqanṭar). Description of the manuscript: Kunitzsch [1] (54).
AS 4801, ff. 114-121	Short [Treatise] on Disposition of Numbers in Magic Squares (Mukhtaṣar fī'l-irshād ilā wafq al-a`dād). Edition with French translation: Sesiano [19].
AS 4830/4	[Treatise on that if two straight lines are similarly divised then the ratio of rectangle of one line by the other to square of the other is equal to the ratio of the rectangle of one part of the first line by the proportional part of the second line to square of the other part]. Description of the manuscript: GAS (V 393-394), SHIM (522).
AS 4830/17	Knowledge of Ortive Amplitude in All Cities, Like Ptolemy Made This from the Diameter of Celestial Sphere (Ma`rifat sā`a al-mashriq fī kull balad `alā mā `amila Baṭlamyūs min quṭr al-falak).
Carulla 1455/5	Commentary on X book on Euclid's "Elements"]. Description of the manuscript: SHIM (523).
Carulla 1457/3	[Algebraic treatise]. Description of the manuscript: SHIM (521). Book in 4 sections: 1) classification of equatios; 2) linear and quadratic equations; 3) equation of higher powers; 4) rule of "two errors". The works (No 595, M3) of al-Abharī and (No 655, M2) of al-Samarkandī ("Shams al-Dīn al-Marāghī") are mentioned.
Carulla 1502/6	Treatise on Proof of Euclid's Postulate by an Unknown Author (Risāla <fī> bayān muṣādarat Uqlīdis li rajul majhūl al-laqab). Descriptions of the manuscript: GAS (V 394), SHIM (522). In this treatise Simplicius, Aghanis, Banū Mūsā (No 74), al-Kindī (No 79), al-Mahānī (No 82), and Ibn Qurra (No 103) are quoted.
Çelebi 229	Treatise from Geometry (Risāla min al-handasa) T.
Esat 11	Rules of the Knowledge of Magic Squares (Dastūr fī ma`rifat al-awfāq).

Esat 125	Book on Magic Squares and other Treatises (Kitāb fī'l-awfāq wa rasā'il ukhrā).
Esat 3804/3	[Treatise on the Astrolabe]. Description of the manuscript: SHIM (596). Treatise in 100 chapters on Astrolabe of al-Zarqālī (No 402).
Esmi khan 295/1	Treatise on Astronomy (Risāla fī'l-hay'a).
Esmi khan 295/2, 296	Concise [Treatise] on Arithmetic (Mukhtaṣar fī'l-ḥisāb).
Esmi khan 297/1	Sufficient on Mathematics (Kifāyat al-ta`ālīm).
Fatih 3385	Introduction to Astronomy (al-Tabṣira fī'l-hay'a).
Fatih 3419/18	[Treatise on Astrolabe].
Fatih 3420	Commentary on "Thirty Chapters" (Sharḥ Sī faṣl). Commentary on the work (No 606, A16) of al-Ṭūsī.
Fatih 3424, 3425	Book on Stars (Kitāb fī'l-nujūm) P.
Fatih 3439/16	[Treatise on Amicable Numbers and Magic Squares]. Descriptions of the manuscript: GAS (V 393), SHIM (521-522). Research: Sesiano [5]. In this treatise works of Ibn Qurra (No 103) and Ibn al-Haytham (No 328) are quoted.
Fatih 3439/18	Instruments of the Astrolabe (ālāt al-asṭurlāb). Treatise on 23 parts of the astrolabe.
Fatih 3439/22	Calculus of "Two Errors" (Ḥisāb al-khaṭa'ayn).
Hamidiye 872/2	Commentary on "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb). Commentary on the work (No 1058, M1) of al-`Āmilī.
Hamidiye 1446	Times and Anwa (al-Azmina wa'l-anwā')
Laleli 2705	Gift to Students on Commentary on "Delight of Arithmetic" (Tuḥfa al-ṭullāb fī sharḥ Nuzhat al-ḥisāb). Commentary on the work (No 873, M12) of Sibṭ al-Māridīnī.
Laleli 2706	Concise Commentary on the Science of Astrology of Naṣīr al-Dīn al-Ṭūsī (Sharḥ al-Mukhtaṣar fī `ilm al-tanjīm li-Naṣīr al-Dīn al-Ṭūsī). Commentary on the work (No 606, A17) of al-Ṭūsī.
Laleli 2710	Comments on commentary on al-Jaghmīnī (Ḥāshiya `alā sharḥ al-Jaghmīnī). Comments on commentary (No 808, A1) by al-Rūmī on the work (No 547, A1) of al-Jaghmīnī.
Laleli 2711	Comments on "Propositions of Substantiation" (Ḥāshiya `alā Ashkāl al-ta'sīs). Comments on the work (No 655, M1) of al-Samarkandī.
Laleli 2714/3	Treatise on Operations with Almucantar Quadrant (Risāla fī'l-`amal bi-rub` al-muqanṭarāt).
Laleli 2716/2, 4, 2726/2	Treatise on Astrolabe (Risālat al-asṭurlāb).
Laleli 2716/3	Treatise on the Perfect Quadrant Called "Guide of Acting" (Risālat al-rub` al-kāmil al-musammā bi-Hidāyat al-`āmil).
Laleli 2723/1	Treatise on the Knowledge of Lunar and Solar Eclipses (Risāla fī ma`rifat al-khusūf wa'l-kusūf).
Laleli 2724/2	Treatise on Operations with the Sine Quadrant (Risāla fī'l-`amal bi'l-rub` al-mujayyab).
Laleli 2728/3	Treatise on Operations with the Almucantar Quadrant (Risāla fī'l-`amal bi rub` al-muqanṭarāt).
Laleli 2729	Higher Treatise on Problems of Sines (Risāla al-`aliyya fī'l-masāil al-jaybiyya).
Laleli 2730	Treatise of Association on the Deaf Root (Risālat khilṭ al-jidhr al-aṣamm). Treatise on irrational roots.
Laleli 2747	Commentary on Abridged <Book> of Ibn al-Bannā (Sharḥ mukhtaṣar Ibn al-Bannā). Commentary on the work (No 696, M1) of Ibn al-Bannā.
Laleli 2751	Commentary on Poem of [Ibn] Abī al-Rijāl (Sharḥ Manẓūmat [Ibn] Abī al-Rijāl). Commentary on astrological poem (No 353, A2).
Laleli 2754	First Limit of Minds on Jewels of the Science of Arithmetic (Ghāyat ūlā al-albāb fī jawāhir `ilm al-ḥisāb).

Laleli 2755	Great Uses of Solution [of Problems for Determining] Sought Unknown (al-Fawāid al-jalīla <fī> ḥall majhulāt al-wasīla).
Laleli 2757	Book of Measurement Called "Aim of Arithmetic" (Kitāb al-misāḥa al-musamma Bughyat al-ḥisāb).
Laleli 2760	Mental Calculation (Tanṣīf hawāi).
Laleli 2761/3	Treatise on Operations with the Astrolabe (Risāla fi'l-`amal bi'l-asṭurlāb).
Laleli 2767/1	Poem on Sapphires of Timekeeping (Manẓumat al-yawāqīt fi'l-mawāqīt).
Laleli 2767/2	Treatise on the Explanation of Four Seasons (Risāla fī bayān al-fuṣul al-arba`a).
Laleli 2767/3	Astronomical Treatise on the Knowledge of Zodiacal Signs and [Lunar] Stations (Risāla falakiyya fī ma`rifat al-buruj wa'l-manāzil).
Selimiye 377	Commentary on al-Jaghmīnī (Sharḥ al-Jaghmīnī). Commentary on the work (No 547, A1) of al-Jaghmīnī.
Yahya 242	Indications of Astrologers on Stars (Tanbīhāt al-munajjimin fi'l-nujum).
Yahya 243	Treatise on the Astrolabe and the Globe (Risālat al-asṭurlāb wa'l-kura).
Yahya 280	Mirror of the World in Observations (Mir'ā `ālam fi'l-raṣad). Ccommentary on the work (No 845, A1) of al-Qushjī.

İstanbul Topkapı Sarayı

3144	Right Direction of Students to the Science of Arithmetic (Irshād al-ṭullāb ilā `ilm al-ḥisāb). Description of the manuscript: Sayyid [1] (7).
3327/5 = SM AS 2672/4	[Treatise on Astrolabe] P.
3342/1	Collection of Rules of the Science of Astronomy (Jāmi` qawānīn `ilm al-hay'a). Description of the manuscript: SHIM (511). Russian translation of the fragment of the foreword and part III of the manuscript: Khayretdinova [1] (451-453). The most plausible author of this treatise was al-Nasawī (No 341, M5).
3453/3	[Proof that for any Regular Polygon the Circle with Circumference Equal to Perimeter of Polygon is Greater than the Polygon, and Polygon with Greater Number of Sides is Greater than the Polygon with Smaller Number of Sides] = Köprülü 941/3.
3464/17	[Treatise on Arithmetic and Algebra]. Description of the manuscript: SHIM (521). Book in 14chapters: 1) foreword; 2) duplication; 3) mediation; 4) addition; 5) substraction; 6) multiplication; 7) division; 8-9) problems; 10) proportional numbers; 11) reduction to unit; 12) completion of parts; 13) linear and quadratic equations; 14) problems.
3490	Sunset of Requires on Equations of Planets (Maghrib al-maṭālib fī ta`dīl al-kawākib). Description of the manuscript: Kunitzsch [1] (99).
3505/6	Book of Explanations of Armillary Sphere Mentioned by Theon of Alexandria (Kitāb tafsīr dhāt al-ḥalaq alladhī dhakarahu Thāwun al-Iskandarānī).
3509/3	Treatise on Operations with the crab-shaped Astrolabe (Risāla fi'l-`amal bi'l-asṭurlāb al-musarṭan).
3509/4	Treatise on Operations witn the Southern Tympanum [for All] Horizons (Risāla fi'l-`amal bi'l-ṣafīḥa al-āfāqiyya dhāt al-janub).
3509/5	Operations with the Sine Quadrant (al-`Amal bi'l-rub` al-mujayyab).
3512	Book of Tables where Lunar Leap Months of Lunar Years are Established by Stars (Kitāb jadwal `uyyina fīhi shuhur al-qamariyya bi'l-sinīn al-qamariyya min qibal al-nujum).
7013	Commentary on Treatise on the Science of Arithmetic (Sharḥ Risāla fī `ilm al-ḥisāb).
Khazine 455	Answer to Doubt about Lunar Parallaxis from Doubts of Abu'l-Qasim ibn Ma`dan (Jawāb shakk fī ikhtilāf manẓar al-qamar min shukuk Abī'l-Qāsim ibn Ma`dān) = Oxford (I 913, 940). Jawab on the treatise (No 187, A1) of `Alī ibn Ma`dān.

Konya Yusuf Ağa Library

735/2	Concise Comments on the "Knowledge of Calendars" of al-Ṭusī (Ḥāshiya mukhtaṣara fī Ma`rifat taqāwīm Ṭusī).

	Commentary on the work (No 606, A17) of al-Ṭūsī.
1042/3-5	Rainbow (Qaws quzaḥ).
1942/6	[Determining the Altitude of Celestial Bodies].
1042/7	[Determining the Altitude of Celestial Bodies and the Longitude and Latitude of Cities].
1042/9	The Qibla (Qibla).
1042/10	The Astrolabe (Asṭurlāb).

Manisa Public Library

1705/10	Concise [Treatise] on the Knowledge of Melody (Mukhtaṣar fī ma`rifat al-nagham).
1706/6	Super-commentary on the work "Conic Sections" (Ḥawāshī `alā kitāb al-Makhrūṭāt). Commentary on "Conic Sections" of Apollonius.

TURKMENISTAN

Ashqabad Institute of Language and Literature

1668	Inheritance (Farāiḍ)
2537/2	Treatise on Determining Unknown Numbers by Method of Algebra and Almucabala (Risāla fī istikhrāj al-majhūlāt al-`adadiyya bi-ṭarīq al-jabr wa'l-muqābala).
2537/5	Treatise on the Proof of Rules of Arithmetic (Risāla fī bayān qawānīn al-ḥisāb).
2537/6	Treatise on the Proof of [Rules] of Measurement of Triangular, Square, Round, and other Solids (Risāla dar bayān-i misāḥat-i ajsām-i muthallath u murabba` u mudawwar u ghayra) P. Research: Atagharyyev [1]. Treatise in 4 parts: 1) definitions of point, line, surface, stright line, and plane figures, 2) measurement of triangles, 3) measurement of polygons, 4) measurement of round figures.
2537/7	Treatise on the Knowledge of Solar Calendar (Risāla fī ma`rifat taqwīm al-mushmis).
2537/18	Commentary on the "Essence of Arithmetic" to the Seventh Chapter (Sharḥ Khulāṣat al-ḥisāb ilā'l-bāb al-sābi`). Commentary on the work (No 1058, M1) of al-`Āmilī.
2891, 3065	[Treatise on Angles at Intersection of a Line with Two Parallel Lines].

UKRAINE

Kharkov University Library

C I 64a	Notions of Inheritance (Mafhūm-i farāiḍ) T.

UNITED KINGDOM

Cambridge University Library

Sup. 436/2	Treatise on the Science of Measurement (Risāla dar `ilm-i misāḥa) P.
Sup. 521/8	Sultan Lamps on Distances of Stars and Basic Volumes (al-Maṣābīḥ al-sulṭāniyya fī'l-ab`ād al-nujūmiyya wa'l-ajrām al-basīṭiyya) P.
Sup. 656	Treatise on Astronomical Instruments and Sine [Quadrant] (Risāla fī'l-ālāt falakiyya wa'l-jayb).
Browne 439	Essence of Siyaq (Khulāṣat al-siyāq) P = Hyderabad (riyad. 311).
Browne 458	Treatise on Eras (Risāla fī'l-tawārīkh).

Edinburgh University Library

259	Treatise on the Science of Magic Squares (Risāla dar `ilm-i wafq) P.
260	Treatise on the Science of Stars (Risāla dar `ilm-i nujūm) P.

British Library London

386/2	Comprehensive Zīj (al-Zīj al-shāmil).
395/1	Book of Commentary on "Thirty Chapters" (Kitāb sharḥ Sī faṣl) Commentary on the work (No 606, A16) of al-Ṭūsī.
408/1	Aim of the Student (Bughyat al-ṭālib).

Poem on the astrolabe.

408/4 [Treatise on Astronomical Observations].

408/9 [Astronomical Poem].

414/2 Treatise on Conjunctions of Planets (Risāla fī iqtirānāt al-kabākib).

761/3 Arabized Treatise (Risāla al-mu`arraba) – Patna (2463).

2324 Treatise on Knowledge of the Globe (Risāla dar ma`rifat-i kura) P.

2361 [Treatise on Music].
Treatise is dedicated to Ottoman Sultan Mehmed II.
Edition: d'Erlanger [1] (IV 1-255).

2818/4 Treatise on the Astrolabe (Risāla-yi asṭurlāb) P.

Sup. 23391 Book of Archimedes on the Construction of Clocks (Kitāb Arshimīdis fī `amal al-sā`āt).
Revision of the treatise of Archimedes = Paris (2468/1)

Sup. 10/2 Removal Difficulties in Measuring Figures (Raf` al-ishkāl fī misāḥat al-ashkāl).

Sup. 774/1 Determining Prayer times by Feet, Determining the Beginning of Month of the Next Year, and the Knowledge how Many from Twenty Eight Stars there is in Every Season (Ma`rifat awqāt al-ṣalāt bi'l-aqdām wa ma`rifat awwal shahri min al-sinīn al-mustaqbala wa ma`rifat kam kull faṣl min al-thamāniyya wa'l-`ishrīn al-najm).

Sup. 2437/1, 3693/2 Concise Treatise on Knowledge Operations with the Northern Truncated Quadrant (Risāla mukhtaṣara fī ma`rifat al-`amal bi'l-rub` al-maqṭū` al-shimālī).

Sup. 2437/2, 3693/3 Concise Treatise on the Sine Quadrant (Risāla mukhtaṣara `alā'l-rub` al-mujayyab).

Sup. 7473/16 Book on Propositions on Conical Sections (Kitāb fī'l-ashkāl al-ṣanawbariyya) (a fragment).
Description of the manuscript: GAS (VII 403).
The treatise contains description of parabolic burning mirrors.

Pers. 6315 Treatise on Stars (Risāla-yi nujūm) P.

Pers. 7858/1, 11137/2 Commentary on "Thirty Chapters" of al-Ṭūsī (Sharḥ-i Sī faṣl al-Ṭūsī)
Commentary on the work (No 606, A16) of al-Ṭūsī.

Pers. 8599 [Astronomical Treatise].

London India Office Library

772/1 Sufficient for Students Needing Knowledge in Astronomical Problems by Reckoning (Kifāya al-muḥtāj min al-ṭullāb ilā ma`rifat masāil al-falakiyya bi'l-ḥisāb).

2252/2 Key for "Twenty Chapters" (Miftāḥ-i Bīst bāb) P.

2255/1 Solution of the Calendar in the Science of Stars (Ḥall al-taqwīm dar `ilm-i nujūm) P.
Commentary on the work (No 606 A17) of al-Ṭūsī.

2256/1 Treatise on the Astrolabe (Risāla-yi asṭurlāb) P.

2528 Treatise on Knowledge of the Globe (Risāla dar ma`rifat-i kura) P.

Manchester Rylands Library

351/B [Treatise on Pneumatics and Hydraulics].

351/C [Treatise on Mechanics].

351/H [Treatise on Water Wheel] P.

352/A [Comments on Treatise on Triangles].

361/H Treatise on Operations with Triangle (Risāla fī'l-`amal bi'l-muthallath).

363 Commentary on "Compendium of Astronomy" (Sharḥ al-Mulakhkhaṣ <fī>'l-hay'a).
Commentary on the work (No 547, A)1 of al-Jaghmīnī.

364 Super-commentary on "Compendium of Astronomy" (Ḥāshiya `alā'l-Mulakhkhaṣ <fī>'l-hay'a) Su al-Khwārizmī's per-commentary on the work (No 547, A)1 of al-Jaghmīnī.

365 Commentary on "Memoir on Astronomy" (Sharḥ al-Tadhkira fī'l-hay'a).
Commentary on the work (No 606, A10) of al-Ṭūsī.

367 Commentary on "Exposition of Almagest" (Tafsīr Taḥrīr al-Majisṭī).
Commentary on the work (No 606, A)1 of al-Ṭūsī.

369/D Treatise on Operations of Timekeeping by Heaven (Risāla <fī> a`māl al-awqāt fī istikhrāj al-sumūt).

Lindesiana 446a Gift of Appearance (Itḥāf al-ḥuḍūr).

	Treatise on optics.
Lindesiana 705a	Commentary on the "Essence of Arithmetic" (Sharḥ Khulāṣat al-ḥisāb). Commentary on the work (No 1058, M1) of al-`Āmilī.

Oxford Bodleian Library

I 913, 940	Answer on Doubts on Lunar Parallaxis from Doubts of Abu'l-Qasim ibn Ma`dan (Jawāb shakk fī ikhtilāf manẓar al-qamar min shukūk Abī'l-Qāsim ibn Ma`dān) = Istanbul (TK Khaz. 455).
I 941/2	Treatise on the Construction of an Instrument of Observation (Risāla <fī> `amal al-mawlid al-raṣadī).
I 941/3	Treatise on Operations with the Tympanum [for All] Horizons (Risāla al-`amal bi'l-ṣafīḥa al-āfāqiyya).
I 941/4	Book on Operations [of Timekeeping] by Night and Day (Kitāb fī a`māl al-layl wa'l-nahār).
I 941/5	Treatise on Operation with the Astrolabe by Method of Questions and Answers (Kitāb al-`amal bi'l-asṭurlāb `alā ṭarīq al-mas'ala wa'l-jawāb). Research: GAS (VI 285).
I 941/7	Book on Operations with the Globe (Kitāb al-`amal bi'l-kura).
I 941/9	Treatise on the Construction of Universal Tympan (Risālat `amal al-ṣafīḥa al-jāmi`a).
I 941/11	Treatise on a Geometric-Astronomical Proposition (Risāla tataḍamman shakl handasī nujūmī). Research: GAS (VI 285). Treatise on the calculation of the diameter of the image of ecliptic on the plane astrolabe.
I 943, 987/42	Geometric Problems Called "Muhdat", that is Premises for Algebraical Problems Obtained from Geometry (Masā'il handasiyya mutarjama bi'l-Muhdāt wa hiya muqaddimāt li masāil jabriyya ustukhrijat bi'l-handasa = Mashhad (5258/3), Tehran (Mu`tamid)
I 954	[Fragment from the Book of Archimedes on the Construction of Clocks].
I 968	Explanation of the Sense of Properties of Observations of the Researcher (Bayān ma`ānī kayfiyyat al-raṣad al-muḥaqqaq). Research: GAS (VI 285). Treatise on the movement of planets.
I 986/1	Concise Definition of Pile by Measure and Weight (Mukhtaṣar ta`rīf al-ṣubra kaylan wa waznan).
I 987/3	Super-commentary on Fifth, Sixth, and Seventh Bppks of "Conic Sections" (Ḥawāshī <`alā> al-maqāla al-khāmisa wa'l-sādisa wa'l-sābi`a fī'l-Makhrūṭāt). Commentary on "Conic Sections" of Apollonius.
I 1011/2	[Arithmetic Treatise]. Description of the manuscript: Uri [1] (219). Book in 3 sections: 1) arithmetic of integers, 2) arithmetic of fractions, 3) "arithmetic of astronomers" (arithmetic of sexagesimal fractions).
I 1012	[Revision of "Almagest"]. In GAL, MAA, and MAMS is wrongly identified with (No 311, A1) of Ibn Sīnā. Research: GAS (VI 291); Goldstein and Swerdlow [1]. English translation of the section on sizes and distances of planets: Goldstein and Swerdlow [1] (146-153).
I 1014	[Arithmetical Treatise].
I 1026/1	Book on the Science of Music Called "Cycles" (Kitāb fī `ilm al-mūsīqā al-mawsūm bi'l-adwār).
I 1026/2	Book on the Knowledge of Harmonic Ratios (Kitāb ma`rifat al-nisab al-ta'līfiyya).
I 1028	Commentary on the "Book of Shams al-Din on Arithmetic" (Sharḥ Kitāb al-shamsiyya <fī>'l-ḥisāb). Commentary on the work (No 686, M1) of al-Naysabūrī.
I 1034/1	The Right Place for Determining the Visibility of the Crescent (Mawḍi` al-adilla li ma`rifat ru'yat al-ahilla)

I 1034/4	[Commentary on the Book of Sajawandī on Algebra]. Commentary on the work (No 527, M5).
I 1037/1	Concise [Treatise] on Mention of Operations Necessary for Arithmetic (Mukhtaṣar fī dhhikr al-a`māl <allatī> yaḥtāj ilayhā al-ḥisāb).
I 1037/2	Treatise Containing Knowledge of the Northern Astrolabe (Risāla-yi mushtamil dar ma`rifat-i asṭurlāb-i shimālī) P.
I 1041/1-3	[Treatise on Quadrants].
I 1043	Limit of Shortness on the Northern Almucantar Quadrant (Ghāya al-ikhtisār `alā rub` al-muqanṭarāt al-shimāliyya).
Pers. I 73/9	[Treatise on Construction and Operations with the Quadrant] P.
Pers. I 75/2 = 1546/2	Treatise on the Latitude of Lands (Risāla-yi arḍ-i balad) P.
Pers. I 75/3 = 1546/3	Treatise on the Astrolabe (Risāla-yi ausṭurlāb) P.
Pers. I 75/4 = 1546/4	Treatise on the Arithmetic of Astronomers (Risāla dar ḥisāb-i tanjīm) P.
Pers. I 77/4 = 1552/4	Book on Sexagesimal Ratio (Kitāb al-nisba al-sittīniyya) P.
Pers. I 79	Sufficient Desired on Numbers of Magic Square (Qanū` al-murād fī wafq al-a`dād) P.
Pers. I 80	[Book of Order and Shape of Celestial Spheres].
Pers. I 299	Treatise on the Science of Astronomy (Risāla fī `ilm al-hay'a).
Pers. I 1506	Treatise on Knowladge of the Globe (Risāla dar ma`rifat-i kura) P.
Pers. I 1525	Treatise on Conjunctions (Risāla-yi qirānāt) P.
Pers. I 1545/2	Treatise on Astronomy (Risāla-yi hay'a) P.
Pers. I 1545/3	[Treatise on the Projection of Astrolabe].
Pers. I 1545/4	Treatise on Quadrants (Risāla-yi rub`iyya) P.
Pers. I 2736	Treatise on Determining the Line of Meridian (Risāla dar istikhrāj-i khaṭṭ-i niṣf al-nahār) P.
Tur. 2211/1	Quadrant of the Circle (Rub`-i dāira) T.
Tur. 2211/2	The Astrolabe (Asṭurlāb) T.
D'Orville 70	Treatise on Hyperbola in Latin translation]. Edition and English translation: Clagett [2].
Eton 64/14	Collection of Commentaries on "Twenty Chapters" (Majmū`-yi sharḥ-i Bist bāb) P. Commentary on the work (No 606, A14) of al-Ṭūsī.

UNITED STATES OF AMERICA

New York Public Library

Spenser 2	[Book of Archimedes of the Construction of Clocks] = Paris (2468/1).

Philadelphia Public Library

1489	Guide to "Almagest" (al-Hādī ilā'l-Majisṭī).

Princeton University Library

Garr. 75	Treatise on Operations by the Instrument of Stars (Risāla fī `amal āla min q ibal al-nujūm) P. Treatise on an astronomical instrument similar to ṭabaq al-manāṭiq described by al-Kāshī in (No 802, A5), dedicated to Ottoman Sultan Beyazıd II (1481-1512).
Garr. 1019	Commentary on "Concise [Treatise] on Knowledge of Ephemerides (Shasḥ al-Mukhtaṣar fī ma`rifat al-taqāwīm). Commentary on the work (No 606, A17) of al-Ṭūsī.
Garr. 1020	[Treatise on the Astrolabe].
Garr. 1021	Treatise on Explanation of Operations with Instrument Called the Sine Quadrant (Sharh `alā risāla fī bayān al-`amal bi'l-āla allatī tusammā bi'l-rub` al-mujayyab). Commentary on first 6 chapters of the work (No 873, A9 or A12) of Sibṭ al-Māridīnī.
Garr. 1022	Indication to Acting with the Truncated Northern Quadrant for Timekeeping, Celestial Movement, and Temporal Hours (Dalāla al-`āmil bi'l-rub` al-maqṭū` al-shimālī ilā'l-mīqāt wa ḥarakat al-samawāt wa'l-sā`āt al-zamāniyya).

Garr. 1023 Treatise on Astrolabe (Risāla fi'l-asṭurlāb).

Garr. 1024 Gift to Students on the Construction of Astrolabe (Tuḥfat al-ṭullāb fī `amal al-asturlāb).

Garr. 1025 Treatise on Operations with the Equatorial Circle in all Cities and Property of Determining Arguments and Operations (Risāla fi'l-`amal bi-dā'irat al-mu`addil fi'l-balad jamī`hā wa kayfiyyat istikhrāj al-ḥiṣas wa'l-a`māl).

Garr. 1026 Detailed Table of Declination (Jadwal maḥlūl al-mayl).

Garr. 1027 Tables of Minutes of the Motion of the Moon (Jadāwil daqā'iq masīr al-qamar.

Garr. 1028 Poetic Necklace on Properties of Letters and their Meaning in the Sciences (al-`Iqd al-manẓūm mā taḥtawī `alayhi al-ḥurūf min khawāṣṣ wa'l-`ulūm).

Garr. 1030 Treatise on the Construction of Plane [Sundials] and the Figures on them (Risāla fī `amal al-basīṭ wa ashkālihā).

Garr. 1031 Ephemerides of Planets and Operations with Zījes (Taqāwīm al-sayyāra wa'l-a`māl al-zījiyya).

Garr. 1046 Golden Castings of Verses of "Delight of Observers on the Science [of Ghubar]" (Sabn al-nuẓār naẓm Nuzhat al-nuẓẓār fī `ilm [al-ghubār).
Poetic Exposition of the work (No 783, M7) of Ibn al-Hā'im.

Garr. 1047 [Arithmetic Treatise].

Garr. 1053 Sufficiently Perfect [Treatise] on the Science of Algebra and Almucabala (al-Muqni`a kāmila fī `ilm al-jabr wa'l-muqābala).

Garr. 1062 Treatise on Obtaining Proofs of Propositions of Substantiation from the Book of Euclid by Arithmetic Theories and Algebraical and Geometric Operations (Risāla fī ijtinā' barāhīn al-`ulūm al-ḥisābiyya wa'l-a`māl al-jabriyya wa'l-misāḥiyya `alā ashkāl al-ta'sīs min kitāb Uqlīdis).

Garr. 1062a Treatise on the Science of Level Balance (Risāla fī `ilm al-qabbān).

Garr. 1063 What is known about the Sun; Night and Day; Wind, Clouds and Rain; Thunder and Lightning; Galaxy and Rainbow and others (Mā warada fi'l-shams fi'l-layl wa'l-nahār fī ... wa'l-riyāḥ fi'l-saḥāb wa'l-maṭar fi'l-ra`d wa'l-barq fi'l-majarra wa'l-qaws wa ghayr dhālika).

Yehuda 358 Useful on Seventh, Eighth, and Ninth Book of Euclid's "Elements" (Fā'ida `alā al-maqāla al-sābi`a wa'l-thāmina wa'l-tāsi`a).
Commentary on Books VII-IX of Euclid's "Elements".

Yehuda 373 Concise Introduction to Knowledge of Fixed Stars and their Constellations (Muqaddima mukhtaṣara fī ma`rifat al-kawākib al-thābita wa ṣuwarihā).

Yehuda 373a Treatise on the set of Definitions of the Science of Astronomy (Risāla fī jawāmi` ta`rīfāt `ilm al-hay'a).

Yehuda 373b Book on the Art on Hours by Measuring Shadows (Kitāb fī ṣinā`a al-sā`āt bi-qiyās al-ẓill).

Yehuda 373c Treatise on the Chord Quadrant (Risāla rub` al-awtār).
Revision of the work (No 750, A23) off Ibn Shāṭir.

Yehuda 669 Treatise on the Science of Astronomy (Risāla fī `ilm al-hay'a).

Yehuda 861 Treatise on Operations with the Astrolabe (Risāla fi'l-`amal bi'l-asṭurlāb).

Yehuda 886 Concise Exposition of Speech on the Form of the World and its Structure (Mujmal min al-qawl fī hay'at al-`ālam wa khilqatihī).

Yehuda 940 Reduction of Questions and Explanation of the Unknowns in Arithmetic (Īrād al-masā'il wa Īḍā ḥ al-majāhil fi'l-ḥisāb).

Yehuda 1029, 4663 [Arithmetic Treatise].

Yehuda 1066, 3168 Treatise on the Globe with a Throne (Risāla fi'l-kurat dhāt al-kursī).

Yehuda 1116 Treatise on Plane and Oblique [Sundials] by Indian Method (Risāla fī basā'iṭ wa'l-munḥarifāt bi'l-ṭarīq al-hindī).

Yehuda 1163 Commentary on the Poem on Arithmetic (Sharḥ `alā manẓūma fii'l-ḥisāb).

Yehuda 2334, 3037, 5924 Treatise on the Almucantar Quadrant (Risāla fī rub` al-muqanṭarāt).

Yehuda 2666 Commentary on Treatise of Fath al-Din (Sharḥ al-risāla al-Fatḥiya).
Commentary on the work (No 873, A7) of Sibṭ al-Māridīnī.

Yehuda 2946	The Pearl of Timekeeping (Durr al-awqāt).
Yehuda 2946a	Knowledge of Timekeeping (Ta`līm al-awqāt).
Yehuda 3021	Book on Arithmetic (Kitāb fi'l-ḥisāb).
Yehuda 3171	Treatise on the Knowledge of Expressions used in the Measurement of Figures and Related to this (Risāla fī ma`rifat iṣṭilāḥāt misāḥat al-ashkāl wa mā yata`allaqu bihī).
Yehuda 3171a	Rules of Determining the Azimuth of Qibla (Qawā`īd fī ma`rifat samt al-Qibla).
Yehuda 3171b	Treatise of Horizons on Operations with Sexagesimal Ratio (Risāla āfāqiyya fi'l-`amal bi'l-nisba al-sittīniyya).
Yehuda 3792	Treatise on Operations with the Quadrant Shikkziyya (Risāla fi'l-`amal bi rub` al-shikkāziyya).
Yehuda 4103	Sufficient Selected on the Science of Timekeeping (Nubdha kāfiyya fī ilm al-mīqāt).
Yehuda 4296. 4477	Treatise on the Construction of [Instrument] that has a Throne (Risāla <fī> a`māl dhāt al-kursī).
Yehuda 4350	Treatise on Operations with the Sine Quadrant (Risāla fi'l-`amal bi'l-rub` al-mujayyab).
Yehuda 4464	Result of Reflections on Operations with the Chord Sine [Quadrant] (Natījat al-afkār fi'l-`amal bi-jayb al-awtār) = Improvement of Treatise of Fatḥ al-Dīn (Iṣlāḥ al-risāla al-Fatḥiyya). Revision of the work (No 873, A7) of Sibt al-Māridīnī.
Yehuda 4757	Treatise on Operations with the Almucantar Quadrant (Risāla fi'l-`amal bi rub` al-muqanṭarāt).
Yehuda 4974	Treatise on Knowledge with the Quadrant on which Almucantars are Drawn (Risāla fī al-`amal bi'l-rub` al-marsūm bi'l-muqanṭarāt).

UZBEKISTAN

Tashkent Institute for Oriental Studies

177/3, 5630/5, 7622/7, 7808/8, 9783/3 [Treatises on Determining the Azimuth of Qibla].

2092 Explanation of Lunar Stations (Sharḥ manāzil al-qamar).

15/6 Treatise on Kinds of Reckoning (Risāla dar anwā`-i ḥisāb) P.
Description of the manuscript: SVR (I 217).

436/12, 442/2, 1206/2, 1859/5, 2666/5, 4467, 5259/5, 9276/1 - [Astronomical Treatises].
Description of the manuscript: SVR (I 227).

446/5 On Properties of Magic Square and Triangle, and the Science of Numbers (Dar khawāṣṣ-i wafq u muthallath u `ilm al-`adad) P.

460/2, 465/7, 3658/2, 3974/1, 4162/2, 4845/8, 5054/3, 5688/2, 3, 6864/3, 7532/3, 8227/1, 8257/10, 13, 10864/7 - [Treatises on Horoscopes].

463/3, 2679/4, 2844/1, 2865/5, 3145, 3291/7, 5600/75, 5855, 6175/1, 6230/3, 7808/10, 8830/3, 5, 10582/2, 10701/2, 11861, 12165 - [Arithmetic Treatises].

463/4, 702/1, 1206/4, 1859/2, 2679/12, 2865/8, 2900/17, 4201/13, 4698/2, 5622/3, 10656, 10809/1, 11058 - [Treatises on Calendars].

467/2 Treatise on Almucantars and Tympanums of Astrolabe (Risāla fi'l-muqanṭarāt wa ṣafā'iḥ al-asṭurlāb).

467/4 Various Astronomical Tables (Jadāwil mukhtalifa fi'l-hay'a).

467/5 Joy of Minds of the Science of Astrolabe (Bahyat al-lubāb fī `ilm al-asṭurlāb).

467/6, 1204/2, 1640/2, 7761/1 [Treatises on Astronomical Instruments].

567, 11860, 13298/2 [Commentary on the work (No 1058, M1) of al-`Āmilī].

1206/6, 3780/2 Concise [Treatise] on the Construction of Astrolabe (Mukhtaṣar dar ṣan`at-i asṭurlāb) P.

1207/2 Science of the Astrolabe (`Ilm-i asṭurlāb) P.
Description of the manuscript: SVR (I 231).
Cosmographical and astronomical treatise.

1356/14 Collection of Uses (Majma` al-ffawāid).
Description of the manuscript: SVR (V 230).
Book in 7 chapters: 1) astrology; 2) places of planets and zodiacal signs; 3) timekeeping by shadow; 4) correspondence of days to degrees of ecliptic; 5) correspondence of week days to planets; 6) horoscopes; 7) happy and unhappy days.

2022/2 Method of the Extraction of Roots (Ṭarīq istikhrāj al-judhūr).

2022/5 Principles Used in Problems of Algebra and Almucabala (Uṣūl yusta`ān biha fī masāil al-jabr wa'l-muqābala).

2245/1 Commentary on Chapters on Inheritance from "Comprehended" (Tafsīr-i āyāt-i farāiḍ al-Madārik) P.
Description of the manuscript: Muzafarova [3].

2245/3 Treatise of Chakmaqi (Risāla-yi Chakmaqi) P.
Treatise on inheritance.

2245/7 Many Selections from the "Key [of Arithmetic]" (Ba`ḍ Mulakhkhaṣ Miftāḥ [al-ḥisāb]) P.
Fragments from the work (No 802, M1) of al-Kāshī.

2245/8 Compendium from the "Key [of Arithmetic]" of Ghiyāth [al-Dīn] al-Kāshī (Mulakhkhhaṣ Miftāḥ [al-ḥisāb li Ghiyāth al-Kāshī).
Abridgement of the work (No 802, M1) of al-Kāshī.

2245/9 Treatise on Arithmetic of Fractions (risāla dae ḥisāb-i kusūr) P.

2245/10 Third Part from the Book of "Commentary on Difficulties of Inheritance" (Qism-i thālith az kitāb-i Sharḥ-i mushkilāt al-farāiḍ) P.

2245/12 Treatise on Geometric Numbers (Risāla dar a`dād-i handasiyya) P.

2245/13 [Commentary on the work (No 527, M8) of al-Sajawandī].

2245/18 Treatise on Inheritance in Dinars (Risāla al-farāiḍ dīnāriyya) P.

2246/8 Second Book on Arithmetic of Fractions (Maqāla-yi thāniya dar ḥisāb-ı kusūr) P.

2316/5, 2572/3, 2692/8,19,12, 5853/3 [Treatises on Fractions of the Dinar].
Description of the manuscripts: SVR (I 218).

2362/1, 2865/6, 4418, 5867/2, 10230, 11173/1 [Astronomical Tables].

2373, 4524/1 Marvels of Countries (`Ajā'ib al-buldān).
Description of the manuscript: SVR (V 302).

2463/9 Treatise on Explanation of Arithmetic (Risāla-yi bayān-i ḥisāb) P.
Description of the manuscript: SVR (I 221).

2526 Introduction of Brothers (Tabṣirat al-ikhwān).
Description of the manuscript: SVR (I 231).
Book in 12 chapters on astronomy, geography, astronomical observations and instruments.

2572/35 Treatise on Magic Squares (Risāla fi'l-wafq) P.

2572/38 Explanation of Transformation (Bayān al-taḥwīl).
Treatise on transformation of dinars to tangs.

2572/40 [Treatise on Magic Squares].
Description of the manuscript: SVR (V 257).

2679/1 Notebook on Arithmetic and Measurement (Daftar-i ḥsāb u misāḥat) P.
Research: Badalov [2].

2679/11 Figures Used by People that are Learned by Teachers of the Science of Siyaq (Arqām dar qawmī ki ustādān fī `ilm al-siyāq ta`līm namūdaand) P.
Description of the manuscript: SVR (V 220).

2692/2 Treatise on Arithmetic (Risāla-yi ḥisāb) P.
Description of the manuscript: SVR (I 217).
Treatise in 2 chapters: 1) arithmetic of integers, 2) arithmemetic of fractions.

2692/3 Treatise on Arithmetic and Measurement (Risāla-yi ḥsāb wa misāḥat) P.
Description of the manuscript: SVR (I 217).

2692/13 On Explanation of Book-keeping (Dar bayān-i muḥāsibāt) P.
Description of the manuscript: SVR (I 218).

2715/1 Keys of Fate (Mafātīḥ al-qaḍā).

2741/1 Treatise on Explanation of Motions of the Sun and the Moon (Risāla dar bayān-i sayr-i āftāb u māhtāb) P.
Description of the manuscript: SVR (I 232).

2818/1, 6, 2865/7, 3291/3, 3374/10, 5513/1, 5864/5, 6425/1, 7808/4, 7822/4, 6, 10364/2, 10418/2
[Geometric Treatises].

2818/4 Aim of Arithmetic (`Inyat al-ḥisāb). [Arithmetic Treatise].

	Description of the manuscript: SVR (I 221).
2908/17	Treatise on Numbers of Magic Square (Risāla dar taksīrāt wa a`dād-i wafq) P. Description of the manuscript: SVR (V 255).
3042/2	Science of the Astrolabe (`Ilm-i asṭurlāb) P.
3042/3	[Geometric Treatise].
3275/2	Algebra and Almucabala (al-Jabr wa'l-muqābala).
3373/4	Abridged Euclid (Mukhtaṣar Uqlīdis).
3809/5	[Treatise on Finger Arithmetic].
3894/3	Problems of Arithmetic and Geometry (Masāil-i hisāb u handasa) P. Research: Abdulla-zade [17].
4750/6	Treatise on Immobility of the Earth (Risāla fī qiyām al-arḍ).
5185/6, 5513/8, 6023/9, 6131/5	[Commentary on the work (No 527, M5) of al-Sajawandī].
5630/4	Treatise on the Knowledge of Qibla (Risāla <fī> ma`rifat al-Qibla) T.
6131/3, 7235/3	[Algebraical Tretises].
6131/9	On Aritmetic of Fractions (Fī ḥisāb al-kusūr).
6181	Arithmetic and Inheritance (Ḥb u farāiḍ) P.
6425/2	Third Book on the Kinds of Measurement (al-Maqāla al-thālitha fi anwā` al-misāḥāt).
7376/2	Concise [Treatise] on the Astrolabe (Mukhtaṣar dar asṭurlāb) P.
7622/3, 7761/2	Treatise on astronomy (Risāla fī'l-hay'a).
7702/3	Treatise on Arithmetic of Multiplication (Risāla ḥisāb ḍarb).
7805/3	Distinction of Twelve Zodiacal Signs (Burūj ithnā `ashara tafāwutī) T.
7822/2	Treatise on Zodiacal Signs (Risāla fī'l-burūj) P.
8154	Instruction to Students (Naṣb al-muta`allimīn).
8257/2	On Explanation of Properties of the Moon (Dar bayān-i khāṣiyyāt-i māh) P. Description of the manuscript: SVR (VII 269).
8257/11, 10124/1	Book on Horoscope (Ṭ` nāma) P.
8312/3	Treatise on Planets (Risāla-yi kawākib) P.
8507/11	Treatise on Fractions(Risāla fī'l-kasr).
8698/1	Treatise on Arithmetic (Risāla dar ḥisāb) P.
8830/2	Treatise on Explanation of the Kinds of Arithmetic (Risāla dar bayān-i anwā`-i ḥisāb) P.
9014	Collection of Arithmetic, Inheritance, and Measurement (Majmū`a-yi ḥisāb u farāiḍ u misāḥat) P.
9254/5	Table of Positions of Stars (Jadwal-i mawqif-i sitārahā) P.
9344/1	Book on the Science of Astronomy (Kitāb dar `ilm-i hay'at) P.
9749	Inheritance, Measurement, and Angles (Farāiḍ u zawāyā) P.
9783	Original Treatise on Knowledge of the Azimuth of Qibla (Risāla-yi badāī-yi ma`rifat-i samt-i Qibla) P.
10191	[Cosmographical and Geographical treatise]. Description of the manuscript: SVR (VII 313-314).

YEMEN

Ghurf City Library

al-Habshi.	Treatise on the Science of Arithmetic (Risāla fi `ilm al-ḥisāb).

Saiwun City Library

al-Qaf 5/4	Smart on the Science of Hours and Days (Risāla laṭfa <fī> `ilm al-sā`āt fī'l-ayyām).
Al-Qaf 27	Selected on the Science of Celestial Sphere (Risāla fī'l-falak).

Tarim Library of Yemeni Hills

al-Husayn 26	Garden of Worthy [Men] (Bustān al-fuḍalā'). Mathematical treatise
al-Husayn 65	Book on the Science of Stars (Kitāb fi `ilm al-nujū.
Al-Husayn 79/5	Indian Book on Arithmetic (Kitāb hindī fī'l-ḥisab).
Al-Husayn 79/8	Useful for the Reckoner (Mufīd al-ḥb).

MANUSCRIPT LIBRARIES

General catalogues: GAL, GAS, MAA, MAA², MAA³, MAMS; Afshar [1], Dagher [1], Huisman [1], Pearson [2], Utas [1], Vajda [1].

AFGHANISTAN

General catalogue: Beaurecueil [1]

Herat
- Library of the Museum. Catalogue: Beaurecueil [1] (313-331)

Kabul
- [National] Arch[ives]. Catalogues: Afdali [1], Afdali and Hayyir [1]
- Adab[iyat] - Library of the Literature Department of University.
- Catalogue: Beaurecueil [1] (333-343)
- Ettelaat - Library of the Information Ministry
- King - Library of the King. Catalogue: Beaurecueil [1] (1-67)
- Ma'arif - Library of the Ministry of Education. Catalogue: Beaurecueil [1] (297-312)
- Matb[u'at] - Library of the Ministry of Press. Catalogue: Beaurecueil [1] (221-296)
- Muz[iyum] - Library of the Museum. Catalogue: Beaurecueil [1](69-220)

ALGERIA

Algiers
- Museum. Catalogue: Fagnan [1]
- Gr. Mos. - Grand Mosque. Catalogue: Ben Cheneb [2]

Tlemcen
- Madrasa. Catalogue: Cour [1]

ARMENIA

Yerevan
- Matenadaran. Institute of Ancient Manuscripts. Description: Abgaryan [1]

AUSTRIA

Vienna
- National Library. Catalogues: Flügel [6], Hammer-Purgstall [1], Loebenstein [1]
- Acad. - Orientalistic Academy. Catalogue: Krafft [1]

AZERBAIJAN

Baku
Institute of Manuscripts of the Academy of Sciences. Survey: Barthold [5]. Catalogue: M.Sultanov [2]

Zakataly
Historical Museum

BANGLADESH

Dhaka
University Library. Catalogues: Habibullah [1], A.Siddiqi [1]

BELGIUM

Brussels
Royal Library

BOSNIA AND HERZEGOVINA

Sarajevo
- Library of Gazi Husrev Beg Mosque. Catalogue: Dobraća [1]
- Orijentalni institut. Catalogue: Traco and Gazić [1]

BULGARIA

Sofia
- National St. Cyril and Methodius Library. Descriptions: `izz al-Din [1], Shishmanov [1]. Catalogue: Sayar [1]

CZECH REPUBLIC

Prague
- National Library. Catalogue: Petracek [1]
- Bibliotheca Strahoviensis. Catalogue: Petracek [2]

DENMARK

Copenhagen
- Royal Library. Catalogues: Mehren [1-2]
- Univ. - University Library. Catalogue: Christensen and Ostrup [1]

EGYPT

Alexandria
- Municipality Library. Catalogue: al-Shindi [1]

Cairo

General Catalogues: Schacht [2-3]

- Dar al-kutub - National Library (former Library of the Khediv). Catalogues of scientific manuscripts: King [28] (FMI), [40] SSM, Catalogues: Barthold [1]. al-Daghistani [1- 2], "Fihrist" [4]. al-Mayhi, al-Biblawi, and Vollers [1], Sayyid [4], Suter [1]. Catalogues of collections - main collection: King [28] (1-366), collection of Ahmad Zaki Pasha: "Catalogue" [2], King [28] (661-672), collection of Halim: "Fihrist" [5], King [28] (651-660), collection of Khalil Agha: King ([28] (643-650), collection of Mustafa Fadil: King [28] (367-458), collection Kavala: "Fihrist" [6], King [28] (673-642), collection of Tal`at: "Catalogue" [3], King [28] (459-572), Sayyid [2], collection of Taymur: King [28] (573-632), Ma`luf [1]
- Azhar - Library of Islamic University Azhar. Catalogue: "Fihrist" [3]
- Kahrabai - Library of Kahrabai
- JDA - Jami`a al-duwal al-`arabiyya - League of Arab Countries. Catalogue: Kunitzsch [1], Sayyid [3, 5].
- Rawda Hairi - Library of Rawda Hairi Pasha. Catalogue: al-Najjar [1]
- Univ. – University Library. Catalogue: "Fihrist" [5]

Fayyum
- Library of Sayyid

al-Mansura
- Library. Catalogue: `Abd al-Tawwab [3]

al-Shibin al-Kum
- Library. Catalogue: `Abd al-Tawwab [1]

al-Zaqaziq
- Library. Catalogue: `Abd al-Tawwab [2]

FRANCE

Paris

- National Library. Catalogues: Blochet [1-2, 4-6], de Slane [1], Vajda [2], Woepcke [19]

Strasbourg

- University Library. Catalogues: Hoghougui [1], Landauer [2]

GEORGIA

Tbilisi

- Institute of Manuscripts of the Academy of Sciences. Catalogues: Abuladze, Gvaramia, and Mamatsashvili [1], Gvaramia, Mamulia, and Kanchaveli [1], Mamatsashvili [1]

GERMANY

General catalogues: Flemming and Goetz [1], Heinz [1], Sellheim [1], Wagner [1]

Berlin

- Staatsbibliothek - State Library. Catalogue: Ahlwardt [1]
- IGMN - Institut der Gesciehte der Medizin und Naturwissenschaften - Institute for History of Medicine and Sciences. Catalogue: Ruska and Hartner [1]

Bonn

- University Library. Catalogue: Gildemeister [1]

Dresden

- Regional Library. Catalogue: Fleischer [1]

Erlangen

- University Library. Catalogue: Irmischer [1]

Göttingen

- Regional and University Library. Catalogues: Meyer [1], "Verzeichnis" [1]

Gotha

- Regional Library. Catalogues: Pertsch [1-3]

Halle

- Bibliothek der Deutschen Morgenlandischen Gesellschaft - Library of German Orientalistic Society. Catalogues: "Katalog" [1], Musharraf-ul-Hakk [1], Wehr [1]

Hamburg

- Stadtbibliothek - City Library. Catalogue: Brockelmann [4], Mordtmann [2]

Heidelberg

- University Library. Catalogue: Berenbach [1]

Karlsruhe

- Regional Library. Catalogue: Landauer and Horn [1]

Leipzig

- Stadtbibliothek - City Library. Catalogue: Fleischer and Delitzsch [1]
- Univ. - University Library. Catalogues: Fleischer [2], M. Hartmann [2], Vollers [1]

Munich

- Staatsbibliothek - State Library, Catalogues: Aumer [1- 2], Gratzl [1]

Rostock

- University Library. Catalogue: A.Hartmann [1]

Tübingen
- University Library. Catalogues: Ewald [1], Seybold [2], Weisweiler [1]

HUNGARY

Budapest
- Oriental Library of the Academy of Sciences

INDIA

General catalogues: STMI, Suhrawardy [1]

Ahmadabad
- Library of Pir Muhammad Shah

Aligarh
- Azad Library. Collections: Abd al-Hayy Farhangi, Habib Ganj, Qutb al-Din, Subhanallah, Sulayman. Catalogue: Kamil Husayn [1] (collection Subhanallah)
- Muslim University (Arabic and Persian manuscripts)

Benares
- Library of Khalil al-Din

Bombay
- As. - Bombay Branch of Royal Asiatic Society. Catalogue: Fysee [1]
- Univ. - University Library. Catalogue: Sarfaraz [1]
- Library of Khan Bahadur. Catalogue: Abdul Hamid [1]

Calcutta
- Library of the Royal Asiatic Society of Bengal. Catalogues: Hidayat Husain, Mahfuzul Haq, and Ishaque [1], Ivanov [1], [2] - collection of Curzon, Kamalud Din and Abdul Muqtadir [1] - collection of Madrasa, Maitra [1], Ross [1]

Buhar
- National Library, collection Buhar - Catalogues: Hidayat Husain [1], Radavi and `Abdul Muqtadir [1]

Hyderabad
- Central Library of the State Andhra-Pradesh, former Asafiyya library. Catalogue: "Fihrist" [1]
- Husayn - Library of Muhammad `Ali Husayn
- Osm. - Osmania University. Catalogue: al-Qaima al-jadida [1]
- Sa`id. - Sa`idiyya Library
- Salar - Mashriqi kutubkhana Salar Jang - Oriental Library Salar Jung. Catalogue: Kabir [1], Nizamuddin [1]

Jaipur
- Library of Maharaja Mang Singh II founded by Saway Jay Singh (No 1322). Catalogue: King [23]

Lucknow
- University Library. Catalogue: Prasad [1]

Madras
- Government Oriental Manuscripts Library: Chandrasekharan [1], Sastri [1] ,
- Mulla Firuz - Library of Mulla Firuz. Catalogues: Brelvi and Dhabbar [1] (Sup.), Rehatsek [1]

Mysore
- City Library
- Tippoo - Oriental Library of Tippoo Sultan. Catalogue: Steward [1]

Navsari
- Library of Meherji Rana. Catalogue: Dhabhar [1]

Patiala

- Library Kapurthala. Catalogues: "Fihrist" [2], Shafi [1]

Patna

- Oriental Public Library at Bankipore . Catalogues: Abdul Hamid [2], Abdul Muqtadir [1-2], M.Nadwi [1]. Research: Hogendijk [3]

Rampur

- Library Rada. Catalogue: "Fihrist" [7]

Tonk

- Library of Bahadur Khan

INDONESIA

Jakarta (former Batavia)

- Library of Central Museum. Catalogues: Friedrich and Van den Berg [1], Van Ronkel [1]

IRAN

General Catalogues: Afshar [2], Mahfuz [1], A.Munzawi [1]

Isfahan

- Catalogues: Danish-Pazhuh [8], Maghsood [1], Rawdati [1]

Kashan

- Catalogue; Danish-Pazhuh [8]

Mashhad

- The Central Library of Astan-i Quds Razavi = "Imam Riza". Catalogues: Gulchin Ma`ani [1], Shanachi, Qazim Mudir, Nurani, and Binash [1], Uqtai [1]
- Library of Madrasa-yi Nawwab. Catalogue: Shanachi, Qazim Mudir, Nurani, and Binash [1]
- Library of Madrasa-yi Sulayman Khan. Catalogue: Shanachi, Qazim Mudir, Nurani, and Binash [2]
- Library of Madrasa-yi Mirza Ja`far. Catalogue: Shanachi, Qazim Mudir, Nurani, and Binash [2]
- Library Farhang. Catalogue: Shanachi, Qazim Mudir, Nurani, and Binash [2]
- Library of Mosque Gawhar Shad. Catalogue: Shanachi, Qazim Mudir, Nurani, and Binash [2]
- Library of Madrasa-yi Fadiliyya. Catalogue: Uqtai [2]

Qumm

- Library of Madrasa-yi Faydiyya. Catalogue: `Iraqi [1]

Rasht

- Public Library of the University. Catalogue: Rawshan [1] *f*

Tabriz

- National Library. Catalogues: Danish-Pazhuh [8] Yunisi [1]
- Tarbiyat - Library of Tarbiyat. Catalogue: Nakhjawandi [1]

Tehran

- Library of Parliament - Kitabhana-yi Majlis. Catalogues: Haeri [1], I'tisami [1], A.Munzawi, Afshar, Danish Pazhuh, and `A.Munzawi [1], Nafisi [6], Z.Shirazi [2]
- Ma`arif - Library of the Ministry of Education. Catalogue: Jawaher Kelam [1]
- Mahdawi - Library of Dr. Asghar Mahdawi. Catalogue: Danish Pazhuh [5]
- Malik - Library of Husayn Agha Malik.
- Milli - Kitabhana-yi Milli - National Library . Catalogue: Anvar [1]
- Minovi - Library of Prof. Mojtaba Minovi. Catalogue: Danish Pazhuh [11]
- Mu`tamid - Library of Mahmud Farhad Mu`tamid. Catalogue: Farzana Pur, Ghulam Riza, and Danish Pazhuh [1]
- Muza - Muza-yi Iran-i bastan - Museum of ancient Iran . Catalogue: Danish Pazhuh [6]
- Nafisi - Library of Prof. Sa`id Nafisi

- Senat - Library of Senat. Catalogues: Danish Pazhuh [7, 10]
- Sipahsalar - Library of the madrasa Sipahsalar. Catalogues: Danish Pazhuh, Shirazi, and Munzawi [1], Z.Shirazi [1]
- Univ. - University Library. Department Libraries: Adab[iyat] - Literature, Huquq - Laws, Ilah[iyat] - Theology, Piz[ishki] - Medicine. Catalogues: Danish Pazhuh [1-4], Fadil [1], Hujjati [1], A.Munzawi [1], Rahaward [1]. Catalogue of microfilms: Danish-Pazhuh [9]

Yazd
- Catalogue: Danish-Pazhuh [8]
- Library of Validi. Library: Shirwani [1]

IRAQ

General survey: `Awwad [1]

Baghdad
- Khazain kutub Awkaf - Waquf Library. Catalogues: al-Jaburi [1], al-Kashshaf [1]
- Islam - Ma`had al-dirasat al-islamiyya - Institute of Islamic Studies
- Mathaf - Mathaf al-`Iraqi - Museum of Iraq. Catalogues: Awwad [2], al-Nakshbandi and Zamya [1- 2]
- Qadir - Library al-Qadiriyya

Basra
- Library al-`Abbasiyya. Catalogue: al-Khaqani [1]

Karbala
- Library of al-Kashani. Catalogue: Huduw [1]

Kazimiyya
- University Library
- Mahfuz - Library of Doctor Husayn Mahfuz

Mosul
General catalogues: al-Jalabi [1]

- Ahmad - Madrasa Ahmadiyya. Catalogue: al-Jalabi [1] (22-40)
- Awqaf - Maktaba al-Awqaf - Library of Waqufs
- al-Basha - Library of Mosque al-Basha. Catalogue: al-Jalabi [1] (46-71)
- al- Diwaji - Library of Sa`id al-Diwaji. Catalogue: al-Diwaji [1]
- Hajiyat - Madrasa Hajiyat. Catalogue: al-Jalabi [1] (98-120)
- Husayn. - Madrasa Husayniyya. Catalogue: al-Jalabi [1] (120-139)
- al-Jalili - Madrasa Yahya Basha al-Jalili. Catalogue: al-Jalabi [1] (227-247)
- Muhammad. - Madrasa Muhammadiyya. Catalogue: al-Jalabi [1] (171-176)
- Nu`man. - Madrasa Nu`maniyya.

Najaf
- Amir - Library of Amir
- Atayallah - Library of Atayallah al-Hakim. Catalogue: "Maktaba" [1]
- al-Gita' - Library of `Ali Kashif al-Gita'
- Hadi - Library of Hadi
- Khwansari - Library of Khwansari
- Musawi - Library of Musawi
- Ordubadi - Library of Ordubadi
- Shushtari - Library of Shushtari
- Ta'rikhi - Library of Ta'rikhi
- Yazdi - Library of Yazdi

Rajab
- Library of Qasim Muhammad al-Rajab. Catalogue: `Awwad [4]
- Sarkis - Library of Ya`qub Sarkis. Catalogue: `Awwad [5]

IRELAND

Dublin
- Trinity College. Catalogue: Abbot [1]
- Beatty - Library of Chester Beatty. Catalogue: Arberry [1]

ISRAEL

Jerusalem
- National and University Libraries
- Khalid. - Library of al-Khalidi. Catalogues: al-Habbal [1], Mukhlis [1]
- Patriarch. - Library of Patriarchate. Catalogue: Koikylides [1]
- Yehuda - Library Yehuda

ITALY

General catalogue: "Cataloghi" [1]

Bologna
- Library of Marsigli. Catalogue: V.Rosen [3]

Florence
- Palatine Library. Catalogue: Assemani [1]
- Med. - Library of Lorenzo Medici. Catalogues: Buonazia [2], Assemani [1]
- Marco - San Marco Library. Description of mathematical manuscripts: Björnbo [5]

Milan
- Library Ambrosiana. Catalogues: Griffini [1], Hammer-Purgstall [2], S.al-Munajjid [1]

Naples
- National Library. Catalogue: Buonazia [1]

Palermo
- National Library. Catalogue: Logumina [1]

Rome
- Ales. - Library Alessandrina. Catalogue: Guidi [3]
- Ang. - Library Angelica. Catalogue: Guidi [2]
- Caet. - Library Caetani. Catalogue: Gabrieli [8]
- Cas. - Library Casanataense. Catalogue: Bonelli [1]
- Vat. - Library of Vatican. Catalogues: Crispo-Moncada [1], Horn [1],
- Levi della Vida [2-3], Mai [1], Rossi [1], Sbath [1]
- Vitt. - Library of Vittorio Emmanuele. Catalogue: Guidi [1]

Turin
- National Library. Catalogue: Nallino [2]
- Acad. - Library of Academy of Science. Catalogue: Nallino [1]

Venice
- Library Marciana. Catalogue: Assemani [2]

LEBANON

General description: Nasrallah [1]

Beirut
- St. Joseph University. Catalogue: Cheikho [1]
- Amer. - American University, Catalogue: "Makhtutat" [1]
- Barudi - Library of al-Barudi, Catalogue: Ma`luf [2]
- Greek - Greek Orthodox School. Partial catalogue - in Cheykho [1]

- Safa - Library of Jirjis Safa. Catalogue: Safa [1]

LIBYA

Tripoli

- Waquf Library

MOROCCO

Ait Ayach

- Library Hamzawiyya

Fas

- Library of Qayrawan Mosque. Catalogues: Basset [1], Bel [1], al-Fasi [1]
- Zawiya - Library Zawiya Sidi Hamza. Catalogue: Renaud [2]

Rabat

- General Library. Catalogues: Allouche and Regragui [1], Blachère and Renaud [1]
- High School of Arabic Language and Berberic Dialects. Catalogue: Lévi-Provençal [1]

Tangier

- Museum. Catalogue: Blochet [3]
- Grande Mosque. Catalogue: Maiiard [1]

Tatwan

- General catalogue: Kannun [1]

THE NETHERLANDS

Amsterdam

- Library of the Royal Academy. Catalogue: Voorhoeve [1]

Leiden

- University Library. Catalogues: De Goeje, Dozy, Yuynball, De Jong, and Houtsma [1], Voorhoeve [1]

NIGERIA

Kaduna

- Jos Museum and Lagard Hall Library. Catalogue: Arif and Abu Hakima [1]

PAKISTAN

General catalogue: Suhrawardi [1]

Karachi

- Anjuman-i Turki. Catalogue: S.Rizawi [1]

Lahore

- Punjab University Library. Catalogue: Abdullah [1]
- Baqir - National Library of Muhammad Baqir. Catalogue: Baqir [2]

Peshawar

- University Library. Catalogue: `Abd al-Rahim [1]

Rawalpindi

- Ganjbakhsh Library of Irano-Pakistan Institute. Catalogue: Tasbihi [1]

POLAND

General catalogues: Debski [1], Majda [1]

Krakow
- Jagello University Library

Wroclaw (Breslau before 1945)
- University Library. Catalogues: Richter [1], Brockelmann [3]

Warsaw
- National Library.
- Univ. - University Library

PORTUGAL

Lisbon
- Library of Academy of Sciences. Catalogue: Basset [1]. Description: Dunlop[9]
- Nat. - National Library. Catalogue: Basset [2]

KAZAKHSTAN (QAZAQSTAN)

Almaty (Alma-Ata)
- State Library

QATAR

Doha
- National Library. Catalogue: Sakr and al-A`zami [1]

RUSSIA

General catalogue: Tveritinova [1]. Catalogue of physics-mathematics manuscripts: Rosenfeld [10]

Mahachqala
General catalogue: Tahirova [1]

- Institute for History, Language and Literature. Catalogues: Gamzatov and Shikhsaidov [1]
- Library of M.Saidov. Catalogue; Shikhsaidov and Umarov [1]

Moscow
- State Library (former Lenin Library). Descriptions: al-Aluchi [1], Andronov and Sobirov [1], Rosenfeld [18]

Kazan
- University Lobachevsky Library. Catalogues: Fathiyev [1], Ideatullin [1]. Description: Karimullin [1]

St.Petersburg (Leningrad in 1924-1991)
- Institute of Oriental Studies (Asiatic Museum). Catalogues: ARIV, Akimushkin a.o. [1], V.Belyayev [1-2], Borshchevskiy [2], Boyevskiy [1], Dorn [3-4, 6], Krachkovskiy [1], Mikhaylova [1], Miklukho-Maclay [2-6], Miklukho-Maclay a.o. [1], Rosen [1-2, 4], Rousseau [1], Salemann [1]. Descriptions: Belyayev [2], Borshchevskiy [1], Dmitriyeva and Muratov [1], Khalidov [2], Miklukho-Maclay a.o. [1]
- Nat. - National Library (former Public Saltykov-Shchedrin Library). Catalogues: Dorn [1- 2], Kostygova [1]. Descriptions: Demidova and Kostygova [1]
- Univ. - University Library. Catalogues: Gottwald [1], Katanov [1], Romaskevich [1], Salemann and Rosen [1]. Descriptions: Abramov [1], Belyayev and Bulgakov [1], Tahirjanov [2]

Ufa (Ofo)
- Scientific Library of Bashkurdistan

SAUDI ARABIA

Medina
General catalogue: Spiess [1]

- Hikmat - Library of `Arif Hikmat Bey
- Ta`riq - Library of Ta`riq

SLOVAKIA

Bratislava
- University Library. Catalogues: Basagic [1], Petracek, Blaskovic, and Vesely [1]

SPAIN

Escorial
- Library of the St. Laurentius Monastery. Catalogues: Casiri [1], Derenbourg [1-2, 5-7], Morata [1], Renaud [5]

Granada
- University Library. Catalogue: Almagro and Cardenas [1]
- Monte - Library Sacro Monte. Catalogue: Asin Palacios [3]
- Sugro - Library Sugro

Madrid
- National Library. Catalogue: Guillen Robles [1]. Description: Derenbourg [3]
  Nav. - Naval Museum. Description: Vernet [3]

Toledo
- Biblioteca Catedral. Catalogue: Millas Vallicrosa [4]

SWEDEN

Lund
- University Library. Catalogue: Tornberg [1]

Stockholm
- Royal Library. Catalogue: Riedel [1]

Uppsala
- University Library: Tornberg [2], Zettersteen [1]

SWITZERLAND

Geneva
- City Library. Catalogue of the collection of von Berchem: Wiet [2]

SYRIA

Aleppo
General catalogues: al-Kashshaf [1- 2], al-Tabbakh [1]

- Basil - Library of Basil
- Hakim - Library of Hakim
- IHAS -Institute for History of Arabic Science. Catalogue: Kamal [1]
- Qaddur - Library of Qaddur
- Waquf - Waquf Library

Damascus
General catalogues: Eche [1], Kahhala [2]. Catalogue: Plessner [2]

- Library al-Zahiriyya. Catalogues: A`idi [1], Sam.Hamarneh [2], Kahhala [1], Khuri [1], al-Sabbagh [1]

TAJIKISTAN

Dushanbe
- Institute for Oriental Studies. Catalogue: Mirzoyev [1]
- Acad. - Library of the Academy of Sciences
- Ferd. - Ferdowsi Library. Catalogues: Qahhorov and Hojiyev [1], Yunusov [1]
- IZA - Institut-i zabon u adabiyot, Institute of Language and Literature.

TUNISIA

Kairouan
- Library of Mosque. Catalogue: Shabbuh [1]

Tunis
- Library Zaytuna al-Sadiqiyya. Catalogues: "Daftar" [34], "Catalogue" [1]
- Ahmad. - Library of the Mosque Ahmadiyya
- Nat. - National Library. Catalogue: Mansur [1]
- Souissi - Library of Muhammad Souissi

TURKEY

For offical names of all libraries and manuscript collections in Turkey see BMLT - *Manuscript Libraries in Turkey and Bibliography of Manuscripts found in these Libraries*, Lugal/Bayraktar, IRCICA, 1995.

General Catalogue: BMLT (Manuscript Libraries in Turkey and Bibliography of Manuscripts found in these Libraries)

Libraries of Turkey. Catalogues: Ritter [2, 5, 7, 9], Şeşen [1], Süssheim [1], Velidi Togan [6]

Libraries of Anatolia. Catalogue: Ateş [5].

Akşehir
- City Library. Catalogue: "Liste" [1]

Ankara
- Umumi - Milli Kütüphane (National Library)
- Univ. – A.Ü. Dil ve Tarih-Coğrafya Fakültesi Kütüphanesi (Library of Faculty of Languages and History-Geography of Ankara University). Collection of İsmail Saib.

Bursa
General catalogues: Gordlevskiy [2], "Liste" [2], O.Rescher [9]

- Haraçç. - Library of Haraççıoğlu

Diyarbakır
- İl Halk kütüphanesi (City Public Library). Catalogue: Şeşen [2]

İstanbul
Catalogues: Barthold [1], Plessner [2], O.Rescher [1, 7, 12], Rhodokanakis [1], Schacht [1-3]. General catalogue of Persian manuscripts: Horn [2]. Catalogue of physical-mathematical manuscripts: SHIM. Descriptions: Dilgan [1], Gordlevskiy [1]

- ArM - Arkeoloji Müzesi (Archeology Museum).
- AM - Askeri Müze (Military Museum). Catalogue: "Daftar" [5]
- Atıf - Atıf Efendi Kütüphanesi (Library of Atıf-Efendi). Catalogues: "Daftar" [6], Sezgin [1]
- BU - Beyazıt Devlet Kütüphanesi (Beyazıt State Library). Collections: General, libraries of Kara Mustafa Paşa and Veliyeddin Efendi. Catalogues: "Daftar" [10, 29, 37]
- Kandilli - Kandilli Rasathanesi (Observatory). Catalogues: "Daftar" [32], Dizer [1]
- Kemankeş - Kemankeş Emir Hoca collection within Hacı Selim Ağa Library. Catalogue: "Daftar" [2]

- Köprülü – Köprülü Kütüphanesi (Köprülü Library). Catalogues: "Daftar" [22], O.Rescher [2, 4], Şeşen, İzgi, and Akpınar [1].
- Millet - Millet Kütüphanesi (National Library). Collections: Ali Emiri, Feyzullah Efendi. Catalogues: "Daftar" [15], Gordlevsky [1].
- Murat - Library of Murat Mulla. Catalogue: "Daftar" [26], M.Gökmen [1]
- NO - Nuruosmaniye Kütüphanesi (Nuruosmaniye Library). Catalogues: "Daftar" [27], O.Rescher [4].
- Ragıp - Ragıp-Paşa Library. Catalogue: "Daftar" [31]
- Selim - Hacı Selim Ağa Library. Catalogues: "Daftar" [2, 16], O. Rescher [1]
- SM - Süleymaniye Kütüphanesi (Süleymaniye Library). Collections: Aksaray Valide Cami, Aşir Efendi, Aya Sofya (AS), Beşir Ağa, Carullah, Çorlulu, Damat Ibrahim Paşa, Esat Efendi, İsmihan Sultan, Fatih, Halet Efendi, Hamidiye, Hasan Hüsnü Paşa, Hafid Efendi, Hafız, Hazis, Husrev Paşa, Karaçelebizade Hüsamettin, Kara Mustafa Paşa, Kılıç Ali Paşa, Laleli, Mihrişah Sultan, Pertev Paşa, Reşit Efendi, Seyfi, Serez, Süleymaniye, Şehit Ali Paşa, Vehbi Bağdatlı, Yahya Tevfik, Yeni Cami, Yeni Medrese, Yıldız, Yusuf Ağa. Catalogues: "Daftar" [1, 3-4, 7-8, 11-12, 14, 17-21, 23-24, 28-30, 36, 38-39, 41-42], O.Rescher [4-6, 8], Ritter [6].
- Teknik Univ. - Technical University Library.
- TK - Topkapı Sarayı Müzesi Kütüphanesi (Library of the Topkapı Palace Museum). Collections: III Ahmet, Bağdat Köşkü, Hazine, Revan Köşkü, V Mehmet. Catalogues: Karatay [2-4], O.Rescher [3].
- Univ. - University Library. Catalogues: Edhem and Stchoukine [1], Karatay [1], O.Rescher [13].

Kastamonu
- İl Halk Kütüphanesi (City Public Library). Catalogue: Ateş [3]

Kayseri
- Library of Rashid Efendi. Catalogues: "Daftar" [33], Velidi Togan [3]

Konya
- General catalogues: Ateş [2]," Liste" [3], Plessner [2]

Manisa
- İl Halk Kütüphanesi (City Public Library). Catalogues: "Liste" [4], Velidi Togan [6]

TURKMENISTAN

Ashqabad
- Dil ve Adabiyat Instituty - Institute of Language and Literature

UKRAINE

Bakhchesaray
- Historical Museum (former palace of the Crimean Khans)

Khar'kov
- Library of University, Description: Kovalevsky [1]

Kiev
- Central Scientific Library of the Academy of Sciences,

Odessa
- State Scientific Library

UNITED KINGDOM

General survey: Pearson [1]

Birmingham
- Library of Selly Oak Colleges. Catalogue: Gottschalk a. o. [1]

Cambridge

- University Library. Colleges: Corpus Christi, King, Trinity. Catalogues: Arberry [2], Browne [1-2, 5], Nicholson [1], Palmer [1-2]. Collection of Frazer is not catalogued.
- Eton College. Catalogue: Margoliuth [1]

Edinburgh

- University. Catalogue: Hakk, Ethé, and Robertson [1]
- New - New College . Catalogue: Sergeant [1]

Glasgow

- University Library. Catalogue: Young and Aitken (Hunterian Museum), Weir [1-2]

London

- British Library (former Library of the British Museum). Catalogues: Ellis and Edwards [1], Meredith-Owens [1-2], Rieu [1-5]
- As. - Library of Royal Asiatic Society. Catalogues: Codrington [1], Morley [1]
- Ind. - Library of the India Office. Catalogues: Ethé [2], Loth [1], Ross and Browne [1]

Manchester

- Rylands Library. Catalogues: Crawford and Kerney [1], Mingana [1]

Oxford

- Bodleian Library. Catalogues: Beeston [2], de la Marc [1], Sachau and Ethé [1], Nicoll and Pusey [1], Uri [1].

UNITED STATES OF AMERICA

Boston

- Museum of Fine Arts

Chicago

- Eastern Institute. Catalogue: Krek [1]
- Newberry – Newberry Library. Catalogue: Macdonald [1]

Detroit

- Collection of Lutfi M. Sa`di

New Haven

- Yale University Library. Catalogue: Nemoy [1]

New York

- Metropolitan Museum. Catalogue: Jackson and Johannan [1]
- Columb. - Columbia University. Catalogue: Martinovitch [1]. Collection: D.E.Smith's collection,
- Publ. - Public Library

Philadelphia

- Free Library. Catalogue: Simsar [1]

Princeton

- University Library. Catalogues: Hitti, Faris, and `Abd al-Malik [1], Houtsma [1], Mach [1], Moghadam and Armajani [1]
- Washington - Library of Congress. Catalogue: A.al-Munajjid [1]

UZBEKISTAN

Bukhara

- Regional Library.

Samarkand

- University Library. Catalogues: Khojiyev [1, 2]

Tashkent
- Institute for Oriental Studies. Catalogues: SVR; Kal' [1]. Descriptions: Azimjanova [1], Azimjanova and Voronovsky [1], Hikmatullayev and Karimova [1], Matviyevskaya [3, 10], Matviyevskaya and Tllashev [1], Muzafarova [7], I.Rajabov [2], Tllashev [7], Vahabova and Akmalova [1], Vil'danova [3]
- SADUM - Islamic Directorate. Descriptions: J.Ibadov [1], Tllashev [1]
- Univ. – University Library. Catalogue: Semyonov [1]

YEMEN

General catalogues: MAY; Khalidov [3], Sayyid [1]

Muqalla
- Library Ba Matraf

Sana'a
- Dar al-kutub al-Yamaniyya - National Library. Catalogue: `Inan [1]
- al-Mansur - Library of al-Mansur. Catalogue: al-Habashi [1]

Saywun
- Library al-Kaf

Tarim
- Library of Hills of Yemen

SURVEYS

The references under the following sub-titles are not comprehensive but indicative.

Arabic Science: Arnaldez, Massignon, and Yushkevich [1], Assani [1], A.Azzawi [3], Brockelmann [1-2], 'Bouamrane [1], Dieterici [1-2], Djebbar [4], Garbers [2], Hartner [17], al-Hasan [8], "Historia" [1-2], Hogendijk [27, 30], King [79] (ENWC), Lorch [16a], Mahdi [7], Matviyevskaya and Rosenfeld [1] (MAMS), Meyerhof [4], Mez [1-2], Mieli [1, 3], Millas-Vallicrosa [1, 7, 9, 11, 13], Muntasir [1], Nasr [7, 11, 14], O'Leary [1], Pines [1, 3], Plessner [4], Rashed [28a], Rosenfeld [46], Rosenthal [6, 12-14], Rossi [1], Rozhanskaya [19], Sabra [12], [13] (GAC), [17, 21, 35, 38], Sa'idan [35], Saliba [12], Sanches Peres [2], Sayılı [3], Sezgin [3-8, 10-14, 22], Shawky and al-Daffa' [1], Souissi [2], Sprenger [2], Suter [4], [8] (MAA), [10] (MAA²), Taton [1-2], Tuqan [2-4], Vernet [6, 11, 14, 18-19, 25-26, 29, 31-35, 37, 39-40], Vernet and Samso [1-2], Wiedemann [1, 4, 15, 157, 178], Zirikli [1], Zubov, Rosenfeld, and Yushkevich [1].

Caucasian Science: Alqadari [1, 2], M.Abdullayev [1, 4], E.Grigorian [1, 3], Guseynov [2], Kaymarazov [1], Krachkovskiy [3, 5], Pogrebysskiy and Bogolyubov [1], Saidov [1], Tarbiyat [1].

Central Asian Science: Abdullayev and Hikmatullayev [1], Abdulla-zade [4, 7], Ahadova [2], A.Ahmedov [32], Ahmedov and Bulgakov [1], Atagharryyev [3], Barthold [6-7], Bulgakov [1], Irisov, Nosirov, and Nizomiddinov [1], Khojiyev [4], Matviyevskaya [1, 4, 7, 9, 14-15, 19-27, 29-30, 37], Matviyevskaya and Tllashev [3-6], Muminov [1-2], Raynov [1], H.Sadyqov [7], Sal'ye [4], Siddyqov [1, 3, 6, 9], Sirajdinov and Ahmedov [5], Sirajdinov and Matviyevskaya [1-2, 4], Sirajdinov, Matviyevskaya, and Ahmedov [3-4], Sobirov [5, 9], Voronovskiy [2], Yushkevich [2], V.Zahidov [7].

Indian Science: Ansari [5], Datta [1], Garcin de Tassy [1], Khojiyev [4], Muzafarova [10], Pingree [1, 5-7], Price [3], Rahman, Khan Ghori, Samba, and Murthy [1] (STMI), Sen [1-2].

Ottoman Science: Adnan [1, 10], Babinger [1] (GOW), Brummett [1], Bursalı (OM) [1], [2] (ENWC) [7] [8], Günergun [1], (HOSSC) [9-10], Ihsanoğlu [3-8], Ihsanoğlu a.o. [1], (OALT), [2] (OMLT), [3] (OCLT), [4] (OMULT), Ünver [7], Zeki [2], Zulfu [1].

Persian Science: Browne [3], Brunner and Pingree [1], Ye.Berthels [6], Storey [2-4], Elgood [1], Kennedy [22, 32, 43], Khojiyev [4], Matviyevskaya and Rosenfeld [1] (MAMS), Pingree [37], Qurbani [1], Qurbani and Hamadanizadeh [1], Safa [2], Storey [2, 4] (PL, PL²), Suter [4], [8] (MAA), [10] (MAA²).

Medieval Astronomy: I.A.Ahmad Ansari [5], Bulgakov [25], Carmody [4], Carra de Vaux [20], Cimino [1], al-Daffa [7], Daiber [2], Delambre [1], Dreyer [1], Duhem [2], Gingerich [2], Goldstein [1, 5, 9, 11-11a-12], Hamadanizadeh [1], Hartner [3, 6, 10-11, 21-23], Hogendijk [12], Hugonnard-Roche [4], Ideler [1], Kennedy [7-8, 21, 44-45, 50], Kennedy and Agha [1], Kennedy and Hogendijk [1], M.A.Khan [3], M.S.Khan [1-2], King [9, 17, 20a-21, 24, 26, 31, 34-35, 42, 48-49, 51, 53-59, 62-62a, 67-72], [74] (ENWC), King and Gingerich [1], Knecht [1], Knobel [1], Knobloch [1], Kunitzsch [2-3, 5-7, 9, 14-15, 18, 20, 24, 26-27, 29-30, 33a, 35-39, 41-42, 44-47], [50-51, 53, 55] (ENWC), Kunitzsch and Smart [1], Kurtik [4, 6], Mercier [1], Mielgo [1], Morelon [3-4], Nallino [3-3a, 6-9], Neugebauer [1, 3-4], Pellat [2] (EI²), Pingree [1-3, 69], Prinsep and de Saussure [1], Ramazanova [1-3], Renaud [7], S.Rizvi [1], Rosenfeld [29, 40], Said and Stefenson [1-3], Saliba [3-4, 7, 11-13, 19, 23, 25-27], Samso [13, 16, 18, 26-27], Sarma [1] (ENWC), Schirmer [1], Schoy [1, 5, 18], Sédillot [3, 6, 10], Sezgin [10] (GAS VI), [19], Sheynin [1], M.Siddiqi [1], Sprenger [1], Stephenson and Said [1-2], Tibbets [1], Tichenor [1], Torroja [1], Tuqan [1], Van Dalen [1-1a-2], Van der Waerden [1] (LM), [4], Varisco [2], Vernet and Orus [1], Viladrich [4-5], Wiedemann [26, 82, 98, 108, 136, 167-168, 184], Yabuuti [1-3].

Medieval Biology: Sam.Hamarneh [3], Sezgin [4-5] (GAS III-IV), Wiedemann [65-66, 134, 171].

Medieval Encyclopaedias: J.Ibadov [6, 9], Matviyevskaya [32].

Medieval Chemistry and Alchemy: Anawati [7], Berthelot [1], Ruska [12], A.S.Sadyqov [1], Sezgin [5] (GAS IV), Wiedemann [2, 18, 41, 48, 56-57, 67, 70-71, 75, 91, 100, 129, 140, 146, 153, 172-174].

Medieval Geography: Abdulla-zade [8], N.Ahmad [1-2], Alawi [1], Buang [1] (ENWC), Decourdemanche [1], Destombes [4], Fedchina [1-2], Ferrand [1-3, 9], Grosset-Grange and Rouquette [1], Haddad and Kennedy [1], Harley and Woodward [1], Hasanov [3, 9-10], Kara Mustafa [1] (ENWC), Kennedy [52], Kennedy and

Kennedy [1], King [77] (ENWC), Krachkovskiy [4], [7] (AGL), [8], Kramers [3] (EI), Lelewel [1], Maqbul Ahmad [4, 7] (EI²), Marti and Viladrich [1], Miller [1], Miquel [1], Ramazanova [4], Reinaud [1], Regier [1], Ruska [5], Schoy [10, 14, 19-20]. Sédillot [4], Shermatov and Sobirov [1], Sezgin [20-21], [22] (GAS X), Shumovskiy [4-6], Taeschner [1], Tibbetts [5] (ENWC), Velidi Togan [1], Wieber [3], Wiedemann [133, 156, 166, 180, 188], Wüstenfeld [3], Yakubov [1].

Medieval Mathematics: Ahadova [6], Berggren [9a-10], S.Brentjes [7a], Carra de Vaux [20], Cantor [3], al-Daffa [1, 3a, 5-6], Djebbar [1, 5], Grant [2], Hankel [1], Hofmann [1], Hogendijk [34] (ENWC), Houzel [1], R.Ibadov [3], Kästner [1], Khojiyev [2], Libri [1], Luckey [3, 5-7], Mamedov-Khayyami [1], North [3], Rashed [22-23, 41a], Rosenfeld [39], Rosenfeld, Krasnova, and Kubesov [1], Rosenfeld and Yushkecich [1, 6], Ruska [13], Sadallah [1], Sa`idan [30, 38], Schoy [29-30], Schramm [3], Sédillot [3, 6, 10], Sesiano [9, 13-14], Sezgin [6] (GAS V), Shawky [1], M.Siddiqi [1], Sobirov [8], Souissi [9], Steinschneider [11], Suter [13], Tropfke [1, 3], Vera [1-4], Vogel [2], Volodarskiy [2, 5], Wertheim [1-2], Woepcke [2-3], Yushkevich [4-5, 9-11], [13] (MA), Yushkevich and Rosenfeld [2-4], N.Yusupov [1], Zarfatti [1], Zeuthen [1-4].

Medieval Mechanics: Clagett [2-3], Duhem [1], Grigorian and Rozhanskaya [1-7], al-Hasan [1-2, 6-7], al-Hasan and Hill [1], Hill [2, 5, 7-9, 11], [15] (ENWC), Levinova [3-4], S.S.Nadwi [5], Pines [3, 6], Reinaud and Favé [1], Rizq [1], Rozhanskaya [4-5, 8, 10-11], Rozhanskaya and Levinova [3], Schacht [4] (EI²), Schioler [1], Schmeller [1], Shawky [2-3], Stolyarova [3-5], Terzioğlu [1-2], Tuqan [1], Wiedemann [21, 23-25, 27, 29, 32-33. 50-52, 74, 95, 105, 115, 122, 147, 158, 164, 179, 186], [192, 201] (EI), Wiedemann and Hauser [1-2, 4, 6], Zikrillayev and Usmanov [1].

Medieval Medicine: Leclerc [1], H.M.Said [3], M.S.Said [1] (ENWC), Sezgin [4] (GAS III), Ullmann [1], Wiedemann [61, 148, 151, 161, 169], Wiedemann, Seidel, and Rescher [1], Wüstenfeld [1].

Medieval Mineralogy: Clement-Mullet [1], Wiedemann [42, 46, 60, 77, 104, 125, 190].

Medieval Music: Barkashli [2], Chabrier [1], Chottin [1], d'Erlanger [1], Ezgü [1], Farmer [1-3, 11-13], Kiesewetter [1], "Muzykal'naya estetika" [1], Neubauer [1-2, 4-5], I.Rajabov [1], P.Rajabov [1], Ribera [1], Rouanet [1], Saghadeyev [1], Saygun [1], Shiloah [4-6], Vyzgo [2], Vyzgo and Rashidova [1-2], Wiedemann and Müller [1], O.Wright [1].

Medieval Philosophy: Aliqulov [2, 4], Badawi [1], de Boer [3-4, 9], Bogoutdinov [3], Carra de Vaux [16] (PI), [16a] (EI), Corbin [2-3], Dhanani [1], Dieterici [7a], Dugat [2], Fakhry [2], Farrukh [2, 6-7], Gardet [4], S.Grigorian [3, 6], Hourani [2], Ignatenko [6-8], Kedrov [1], Leaman [2], Mouhasseb [1], Nasr [3-5, 8, 13], Quadri [1-2], Qumayr [1], Radev [1], N.Rescher [3], Saghadeyev [1, 5-6], Sharif [1], al-Shimali [1], H.Simon [1], Tisini [1], Ueberweg [1], Ülken [1, 3-4], Zakuyev [1].

Medieval Physics: Blay and Troupeau [1], Federici Vescovini [1], Gliozzi [1], Kheirandish [1] (ENWC), Lettinck [1], Lindberg [2-3, 7, 11-12], Lohne [1-2], MacGrew [1] (ENWC), Meyerhof [1], Orlova [1-4], Rashed [45], Rosenberger [1], Russell [1], Sabra [34] (EI²), Schramm [1], Shuja [1], A.M.Smith [1, 3], Trouessar [1], Wiedemann [5, 11-13, 17, 19, 89, 93, 103, 114, 162, 170], Zikrillayev [4, 6].

Algebra: Anbuba [6], Bin Ismail [1] (ENWC), Catala [1-2], al-Daffa and Stroyls [2], Djebbar [4], Dold-Samplonius [13]. Hartner [14] (EI²), Höyrup [1-2], King [67], Rashed [8, 10, 12, 41, 43], Sadritdinova [2], Sa`idan [33], Saliba [1], Shawky [6], Strachey [1], Tekeli [7], Tropfke [2], Tytler [1-3], Van der Waerden [3], Wiedemann [73], Woepcke [7, 11, 21], Yadegari [2], Zeki [1].

Arithmetic: Carra de Vaux [8], King [4, 18], Sa`idan [5, 7, 11, 20, 39], J.Smith [1] (ENWC), Souissi [1] (EI²), Suter [38a] (EI), Woepcke [6, 25].

Astrology: Albin [1], Aubier [1], Carmody [4], Hogendijk [17-18], Kennedy [48-49, 53], Kennedy and Krikorian-Preissler [1], Lemay [7], Nallino [3b, 7, 9], Renaud [7], Samso [10, 12], Sezgin [11] (GAS VII), Wiedemann [129, 181],

Astronomical Observatories: De Young [11-12] (ENWC), Mamedbeyli [5-6], S.Nadwi [4], Saliba [22], Sayılı [2, 10, 13, 18, 19a],

Astronomical Instruments (General): Carandell, Puig, Samso, Vernet, and Viladrich [1], Destombes [5], Dorn [5], Hartner [5], King [19, 27, 45, 60-62a, 64-66], [73] (ENWC), Millas-Vallicrosa [6], Mogenet [1-2],

Nolte [1], Rosenfeld and Tagi-zade [1], Samso [15], [23] (EI²), Sarma [2], Sédillot [7], Sezgin [17], J.Smith [3] (ENWC), Tagi-zade [3, 5], Tekeli [15], Wiedemann [35, 84, 137], Würschmidt [1].

Astrolabes: Berggren [13a], Brieux [1], Brieux and Maddison [1], Destombes [4], Frank [1], Gibbs, Henderson, Janice, and Price [1], Gingerich [3], Gunther [2], Hartner [4], [8] (EI²), King [27, 29, 37, 46], Kunitzsch [23], Millas-Vallicrosa [10], S.Nadwi [2-3], Nallino [4, 10], Neugebauer [2], North [1-2], Pingree [63] (EIr), Poulle [1], R.Puig [3], Reich and Wiet [1], Renaud [6], Rohr [1], Rosenfeld and Abdurahmanov [1], Samso [1, 5], Schoy [1, 5, 12, 22-23, 25], Seemann and Mittelberger [1], Sesiano [21], J.Smith [2] (ENWC), Tagi-zade [4, 6], Tagi-zade and Vahabov [1], R.Thomson [1], Vahabov and Tagi-zade [1], Viladrich [1], Viladrich and Marti [1], Wiedemann [119], Woepcke [17, 24], Würschmidt [5, 7].

Azimuth of Qibla: Bruins [4], Iljas [1] (ENWC), King [20a, 39, 43], King and Lorch [1], S.Rizvi [1], Schoy [7], Wensinck and Schoy [1] (EI).

Clocks and Timekeping: Hill [13] (ENWC), Janin [1], King [11-13, 16, 50], Pedersen [1], Price [1-2], Rohr [1], Rosenfeld [60] (ENWC], Schoy [2-4, 10, 25], Stern [1] (ENWC), Wiedemann and Frank [5], Würschmidt [5, 7].

Celestial Globes and Maps: Destombes [2-3], Mamedbeyli [4], Savage-Smith [1-2] (ENWC).

Chronology: Ginzel [1], Hartner [2], Ideler [2], Kennedy [18], Tsybul'skiy [1-2].

Combinatorics: Djebbar [7] (ENWC), Katz [1],

Deals and Inheritance Reckoning: A.Qadyrov [1], Rebstock [1], Sesiano [10, 15].

Decimal Fractions: Rashed [14].

Education: Tllashev [8-9].

Experimental Science and Magic: Thorndike [1], Ullmann [2], Wiedemann [88, 102].

Finger Reckoning: Marre [2], Pellat [6] (EI²), Ruska [7], Sa`idan [9],

Geometry (general): Ahmedov [2-3], S.Brentjes [11] (ENWC), Busard [2], Hermelink [6], Hogendijk [33] (ENWC), King [70a], Rosenfeld [25, 45, 54], Rosenfeld and Yushkevich [12], Sa`idan [37], Souissi [10].

Geometric Constructions: Anbuba [5, 7], Hogendijk [1-2, 5], Kohl [3], Krasnova [1-6], Sa`idan [31], Scriba [2], "Vvedeniye" [1], Wiedemann [165],

Geometric Measuring: Schirmer [2-3], Wiedemann [73],

Geometric Transformations: Lyuter [2-3], Rosenfeld [12, 25-26, 45],

History: M.al-Tabari [1], Sezgin [3] (GAS I), Storey [2-4] (PL, PL2), Wiedemann [155], Wüstenfeld [2].

Infinitesimal Mathematics: Bebbouchi [1], al-Dabbagh [2, 6], Hartner and Schramm [1], Rosenfeld [26].

Interpolation: Hamadanizadeh [3-5, 7], Kennedy [15], Rashed [30],

Islamic Dynasties: Bosworth [1], Lane-Poole [1, 3], Zambaur [1].

Magic Squares: Ahrens [1-2], Bergsträsser [2], Carra de Vaux [22], Hermelink [1-2], Sesiano [5-6, 12, 16a, 21-24], Wiedemann [160].

Measures and Weights: Hinz [2-3], Ibel [1], Rebstock [3] (ENWC).

Mathematical Atomism: Baffioni [1], Dhanani [1] [2] (ENWC), Macdonald [4], Pines [1, 5], Pretzl [1], Rosenfeld [26], Sasaki [1], Tleuberdiyev [5-7],

Mathematical Logic: Sa`idan [27],

Meteorology: MacPeak [1] (ENWC), Sezgin [11] (GAS VII), Wiedemann [144-145].

Number theory: al-Daffa and Stroyls [1], Djebbar [3a], Dobrovol'skiy, Kahhorov, and Khojiyev [1], Ja`fari Naini [1], Rashed [21, 24, 44], Sa`idan [20], Sesiano [29] (ENWC), Stroyls [1],

Numeration: Colin [1], Faggedon [1], Gandz [1], Hogendijk [22], Irani [1-2], Kaye [2], Labarta and Barcelo [1], Lemay [4], Mazahéri [2], Largy [1], Qarryyev [1], Ruska [9], Sa`idan [29, 39], Sesiano [8, 16], D.Smith and Mourad [1], Woepcke [12, 18, 20].

Psychology: Yaroshevskiy [1].

Quadrants: King [63], Lorch [19] (ENWC), Rohr [2], Schmalzl [1], Tagi-zade [7], Würschmidt [6].

Series Summation: Sa`idan [20], Woepcke [22-23].

Terrestrial and Celestial Events: Buniatov [3-4], Gingerich [1], Mayer [1], Maystrov [1], Wiedemann [167].

Theory of Ratios: De Young [7], Plooij [1].

Theory of Parallel Lines: Matviyevskaya [18], Rosenfeld [5, 7, 11, 25, 45], Rosenfeld and Yushkevich [10-11], Wallis [1],

Trigonometry: Braunmühl [2], Bruins [4], Bürger and Kohl [1], Catala [2], Chalhoub and Rosenfeld [1] (ENWC), Debarnot [5], Khayretdinova [3, 5, 7, 11-13], Matviyevskaya [32a, 38], Schoy [24], Sirajdinov [1], Sobirov [7], Suter [3, 20, 37], Villuendas [3], Woepcke [10], G.Yusupova [2].

Traces of Lost Greek Works: Giannakis [1], Hogendijk [9, 20], Lippert [1], Pingree [15], Rashed [11], Ruska [15], Sabra [31], Sa`idan [3], Sezgin [15], Wenrich [1], Woepcke [13].

REFERENCES

Aaboe, Asger Hartvig

1. Al-Kashi Iteration Method for the Determination of sin 1° - Scripta Mathematica. 20, 1954, 24-29.

al-`Abadi (No 549)

1. Tahrir Usul Uqlidis. Tehran. 1296 h. [1879]; Bombay. 1318 h. [1900].

Abadi, Mahmud Najm

1. Sharh-i hal wa maqam-i Muhammad Zakariya Razi. Tehran, 1318 h. [1900].

Abalakin, V. K., Abdulla-zade, Kh. F., Belyayev, N. A., Zausayev, A. F.

1. Geotsentricheskiye eklipticheskiye dolgoty planet i Solntsa po Jili i Beruni v sopostavlenii s sovremennymi vychisleniyami. - Astronomicheskiy Vestnik. 18, 1984, No 1, 62-69.

Aballagh, Mohamed

1. Étude comparative du Talkhis et du Raf` al-hijab d'Ibn al-Banna. - "al-Multaqi" [1], 1986, 22-24.
2. L'influence des écrits mathématiques d'Ibn al-Banna sur les mathématiciens égyptiens de l'Empire Ottoman. - ACIHS XX, 1997, 67.

Aballagh, M. and Djebbar, A.

1. Découverte d'un écrit mathématique d'al-Hassar (XII s.). Le livre I du Kamil. - HM. 14, 1987, No 2. 147-158.

Abbot, T.K.

1. Catalogues of the Manuscripts in the Library of the Trinity College. Dublin, 1900.

Abbud, Fuad

1. The Planetary Theory of Ibn al-Shatir: Reduction of the Geometric Models to Numerical Tables. - Isis. 53, 1962, 492-499; "Ibn al-Shatir" [1], 1976, 73-80; "Kennedy" [1], 1983, 64-71.

`Abd al-Hamid [Abdul Hamid]

1. Fihrist-i dastiyi-i kutub-i qalami-i Laybriri mawqufa Khan Bahadur Khudabakhsh Khan marhum musamma ba Miftah al-kunuz al-khafiyya. 1-2. Patna, 1918-1922.
2. Catalogue of the Arabic and Persian Manuscript in the Oriental Public Library at Bankipore. 22, Patna, 1937.

`Abd al-Jawad [Abdeljaouad], Mahdi and Hedfi, Hmida [Hadfi, Hamida]

1. Vers une étude des aspects historiques et mathématiques des problèmes ouverts d'Ibn Khawwam (XIII s.). - "al-Multaki" [1], 1886, 151-178.

`Abd al-Latif, `Ali Ishaq

1. Misaha al-ukar bi'l-ukar li'l-Sijzi. Dirasa wa tahqiq. - al-Mawrid. 16, 1407 h. [1987], 123-150.
2. Maqala mustaqsa` fi'l-ashkal al-hilaliyya li-Ibn al-Haytham. - "al-Multaqi" [2], 1995, A40-A67.

`Abd al- Muqtadir [Abdul Muqtadir]

1. Catalogue of the Arabic and Persian Manuscripts in the Oriental Public Library at Bankipore. Calcutta, 1908.
2. Fihrist-i nusakh-i khatti-yi farsi Oriental Pablik Laybriri Bankipur musamma ba Mir'at al-`ulum. Patna, 1925.

`Abd al-Nur, Jabbur

1. Ikhwan al-Safa. Beirut, 1373 h. [1954].

`Abd al-Rahim

1. Lubab al-ma`arif al-`ilmiyya fi maktaba Dar al-`ulum al-Islamiyya. Peshawarki fihrist-i kutub. Agra, 1918.

`Abd al- Rahman [Abdul Rahman], Hikmat Najib

1. Arab Chemistry and its (First) Pioneer, Jabir ibn Hayyan. al-Kimiya `inda `arab wa raiduha al-awwal Jabir ibn Hayyan. - ISHAS 1. I, 1977, 301-344; II, 1978, 132.

`Abd al- Rahman, Muhammad

1. Wujud jadawil fi Zij Ibn al-Haim. - "From Baghdad to Barcelona" [1]. I, 1996, 365-381.

`Abd al-Tawwab, Abd al-Rahman

1. Dar al-kutub bi-Shibin al-Kum. - MMMA. 2, 1956, 264-285.
2. Qaima makhtutat Dar al-kutub bi'l-Zaqaziq. - MMMA. 3, 1957, 79-104.
3. Qaima makhtutat Dar al-kutub bi'l-Mansura. - MMMA. 4, 1958, 259-300.

Abdi, Wazir Hasan

1. Mulla Mahmud Jaunpuri's Theory of Moon-spots. - IJHS. 22, 1987, No 1, 47-50.

Abdil'din, Jabaykhan Mubarak uly

1. Logika i teoriya poznaniya al'-Farabi. - "al-Farabi" [4], 1975, 10-12.

Abdukabirov, Azamjon

1. Nekotoryye zadachi iz vypolnennoy Ibn al-Haysamom rekonstruktsii vos'moy knigi "Konicheskiye secheniya" Apolloniya - "Ibn Sina" [14], 1981, 80-94.

Abdulkhalilov, B.

1. Hajji Khalifa ob Ulugbeke i yego shkole. - ONU. 1994, No 7, 62-65.

Abdullah, Sayyid Muhammed

1. Descriptive Catalogue of the Arabic, Persian and Urdu Manuscripts in the Punjab University Library. - The Oriental College Magazine, Lahore. 1926, No 1, 55-70, No 8, 45-60, 1927, No 2, 73-80, No 5, 63-77.

Abdullayev, Ismatulla Abdulla ughli

1. Beruniy va uning "Qadimli halqlardan qolgan yodgorliklar" asari. - al-Biruni [32], 1968, 5-20.

Abdullayev, I., and Hikmatullayev, H.

1. Samarqandlik olimlar. Toshkent, 1969.

Abdullayev, Magomed Abdullayevich

1. Mysliteli Dagestana XIX i nachala XX vv. Mahachqala, 1963.
2. Iz istorii filosofskoy i obshchestvenno-politicheskoy mysli narodov Dagestana v XIX v. M., 1968.
3. Ibn Sina i yestestvennonauchnaya mysl' v Dagestane. - "Ibn Sina" [12], 1981, 119-127.
4. Al-Khorezmi i nauchnaya mysl' v Dagestane. - al-Khwarizmi [4], 1985, 228-232.

Abdulla-zade, Khurshed Fayzulla zade

1. Matematiki i astronomy X v. Abu Mahmud Khojendi i Kushyar ibn Labban. - Tezisy dokladov respublikanskoy konf. molodykh uchonykh i spetsialistov Taj. SSR. Dushanbe, 1974, 30-31.
2. Tablitsa ekvatorial'nykh koordinat yarkikh zvyozd Kushiyara Jili. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk. 1977, No 4, 25-28.
3. Astronomicheskiye traktaty Kushiyara Jili. - TNKA XX (fm). 1978, 2-6.
4. Tvorcheskoye sotrudnichestvo astronomov Blizhnego i Srednego Vostoka v X i v nachale XI vekov. Dushanbe, 1977.
5. Spisok trudov Ibn Sina po yestestvennym naukam. - IAN Taj. SSR, otd. fiz.-mat., khim. i geol. nauk. 1980, No 3, 101-104.
6. Traktat "Ob utochnenii naibol'shego skloneniya i shiroty goroda" Abu Mahmuda Khujandi. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk. 1980, No 1, 17-22.
7. Tvorcheskoye sotrudnichestvo uchonykh epokhi Ibn Sina. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk. 1980. No 3, 96-100.
8. Geograficheskiye koordinaty naselyonnykh punktov v trudakh uchonykh sredneveko-vogo Vostoka. - "Materialy po istorii kul'tury i istorii Tajikistana". Dushanbe, 1981, 155-162.
9. Kushiyar Jili i razvitiye nauki Sredney Azii i Irana v X veke. - ADK (i). Dushanbe, 1982.
10. Al-Khorezmi i Bagdadskaya astronomicheskaya shkola. - "al-Khwarizmi" [2], 1983, 145-155.
11. O nauchnom nasledii matematika i astronoma X-XI vv. Abu Saida Sijizi. - "al-Khwarizmi" [2], 1983, 201-206.
12. "Pis'mo k Abu Saidu" Abu Rayhana Beruni. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk. 1983, No 3, 16-20.
13. Al-Khorezmi i bagdadskiye astronomy. - "al-Khwarizmi" [4], 1985, 178-183.
14. Astronomicheskiye trudy Kutb ad-Dina Lari. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk. 1985, No 4, 26-30.

15. "Traktat o nablyudatel'nykh instrumentakh" Nizam ad-Dina Birjandi. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk. 1986, No 3, 17-21.
16. "Kniga ob astrolyabii" Kushyara Jili. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk . 1986, No 4, 36-42.
17. Arifmeticheskiy traktat neizvestnogo avtora. - IAN Taj. SSR, otd. fiz.-mat., i geol.- khim. nauk. 1988, No 4, 20-26.
18. "Kniga o deystviyakh v indiyskoy arifmetike" Kushyara ibn Labbana. Dushanbe, 1989.

Abdulla-zade, Kh. F. and Zausayev, A. F.

1. Opredeleniye eklipticheskikh koordinat planet v trudakh uchonykh srednevekovogo Vostoka. - DAN Taj. SSR. 24, 1981, No 7, 417-421.
2. Eklipticheskiye dolgoty Marsa, Yupitera i Saturna po Kushyaru Jili v sopostavlenii s sovremennymi dannymi. - Astronomicheskiy tsirkulyar, 1981, No 1194.
3. Eklipticheskiye koordinaty verkhnikh planet v rabotakh Jili. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk. 1982, No 1, 118-120.

Abdulla-zade, Kh. F. and Neghmatov, Nughman Neghmat zade

1. Abu Mahmud Khujandi. Dushanbe, 1986.

Abdulla-zade, Kh. F. and Sobirov G. S.

1. Nauchnoye naslediye astronoma i matematika X v. Kushyara Jili. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk. 1978, No 3, 29-34.

Abdulqasumova, Nazilya Amir kyzy

1. "Tahrir al'-Majisti" M.N.Tusi (pervaya kniga). - IAN Azerb. SSR, ser. fiz.-tekh. i matem. nauk. 1977, No 4, 114-121.
2. Ploskaya i sfericheskaya trigonometriya v trudakh Nasireddina Tusi. - ADK(fm). Baku, 1994.

Abdulqasumova N. A. and Huseynova Zakiya A.

1. "Almagest" Ptolemeya v obrabotke Nasireddina Tusi. - ACIHS XIII. Materialy po istorii fiz.-mat. nauk. M., 1971, I.

Abdurahmanov [Abdurahmonov], Abdumannon

1. Novyye issledovaniya o matematike al-Biruni. - TNKA XII(m). 1969, 3-8.
2. Beruniyning "Soyalar" risolasi. - Sovet maktabi. 1970, No 2, 47-52.
3. Traktat al-Biruni "Ischerpaniye razlichnykh sposobov v iskusstve astrolyabii". - TNKA XIII(m). 1970, 115-120.
4. Matematika v astronomicheskikh trudakh Beruni. ADK(fm). Tash., 1970.
5. Matematika v "Sanjarskom zije" Abdurahmana Khazini. - "Iz istorii" [2], 1972, 6-12.
6. Beruniy asarlarida trigonometriyaning ba'zi teoremalari. - "al-Biruni" [8], 1973, 159-169.
7. Muhammad ibn Musa al-Khorazmiy - buyuk matematik. Toshkent, 1983.
8. Al-Khorezmi - velikiy matematik. - al-Khwarizmi [4], 1985, 149-151.

Abdurahmanov, A. and Ahmedov, A.

1. Predisloviye Banu Musa k "Konicheskim secheniyam" Apolloniya. - "Ibn Sina" [14], 1981, 59-79.

Abed,Sh.B., Achena,M., Gutas,D., Mahdi,M., Marmura,M.E., Mussalam,B., Rah-man,F., Saliba,G., Weisser,U., Wright,O.

1. Avicenna. - EIr. 3, 1988, 66-110.

Abel, Armand

1. Le sélénographie d'Ibn al Haitham (965-1039) dans ses rapports avec la science grecque. - Comptes rendus de II-e Congrès nat. des sciences, Bruxelles, 1935, 76-81.

Abgaryan, G. V.

1. Kratkiy obzor rukopisey fondov Matenadarana. - "Vostokovednyye fondy" [1], 1963, 127-142.

Abgrall, Philippe

1. Les cercles tangents d'al-Quhi. - ASP, 5, 1995. No 2, 263-295.

al-Abhari (No 595)

1. Isagoge, i.e. breve introductorium arabum in scietiarum logicae cum versione latino. Ed. Thomas Novariensis. Romae, 1625.
2. al-Isaghuji. Istanbul, 1235 h. [1819], 1310 h. [1892]; Qazan, 1305 h. [1887], 1313 h. [1895], 1316 h. [1899], 1320 h. [1901], 1320 h. [1902], 1324 h. [1906].
3. al-Isaghuji. Transl. E.Calverly. - D.B.Macdonald Memorial Volume, Princeton, 1933, 75-88.
4. Hidaya al-hikma. Kalkata, undated; Lakhnaw, undated.

Abramov A. T.

1. Vostochnyy otdel nauchnoy biblioteki Leningradskogo gos. universiteta.- "Vostokovednyye fondy" [1] , 1968, 218-228.

Abrarova, Muqaddas Abrar qizi

1. Novyy matematicheskiy traktat al-Karaji. - IAN Uzb. SSR, ser. fiz.-mat. nauk. 1976, No 2, 75-77.
2. Al-Karaji i yego "Ob'yemlyushchaya kniga ob arifmetike". - "Matematika Vostoka" [1], 1977, 107-113.
3. Iz istorii prepodavaniya matematiki v Bukhare. ADK(p). Tash., 1978.
4. Geometricheskiy razdel traktata al-Karaji "Ob'yemlyushchaya kniga ob arifmetike". - "Ibn Sina" [14], 1981, 95-125.
5. Algebraicheskiy razdel traktata al-Karaji "Ob'yemlyushcheye ob arifmetike". - "Iz istorii" [4], 1983, 49-53.
6. Razvitiye idey al-Khorezmi v rabotakh al-Karaji. - "al-Khwarizmi" [4], 1985, 247-251.

Abu Hanifa (No 97)

1. Kitab al-ahbar at-tiwal. Publié par Vladimir Guirgass. Leyde, 1888.
2. Kitab al-ahbar at-tiwal. Préface, variantes et index publiés par Ignace Kratch-kovsky. Leyde, 1912.
3. Kitab al-azmina wa'l-amkina. Haydarabad, 1332 h. [1914].
4. Abu Hanifa ad-Dinawari. The Book of Plants. Part of the alphabetical section A-R. Ed. by Bernhard Lewin. Uppsala - Wiesbaden, 1953.
5. Le dictionnaire botanique d'Abu Hanifa ad-Dinawari, Kitab an-nabat; de sa reconstition d'après les citations des ouvrages postérieurs par Muhammad Hamidullah. Le Caire, 1973.
6. Abu Hanifa ad-Dinawari. The Book of Plants. Part of the monograph section. Ed. by Bernhard Lewin. Wiesbaden, 1974.
7. Abu Hanifah Al-Dinawari's Book of Plants. An annotated English translation of the extant alphabetical portion by Catherine Alice Yff Breslin. Ann Arbor, 1988.

Abu Kamil (No 124)

1. al-Taraif fi'l-hisab. Nashara A.S.Sa'idan. - MMMA. 9, 1963, 291-320.
2. The Algebra of Abu Kamil, Kitab fi al-jabr wa'l-muqabala, in a Commentary by Mordecai Finzi. Hebrew Text, Transl. and Comm. with Special Reference to the Arabic Text by M.Levey. Madison, Milwaukee, and L., 1966.
3. Izmereniye pyatiugol'nika i desyatiugol'nika. Per. B.A.Rozenfel'da (otryvok). - "Bashmakova" [1] , 1975, 55-57.
4. Kitab al-jabr wa'l-muqabala. The Book of Algebra. With Introduction in English and Arabic by Jan Hogendijk. F.M., 1986.

Abuladze, Tsisana, Gvaramia, Rusudan, Mamatsashvili, Maia

1. K.Kekelidzis sakhelobis Khelnatserta institutis arabul, turkul da sparsul khelnatserta katalogi (K kolektsia). Katalog arabskikh, tyurkskikh i persidskikh rukopisey Instituta rukopisey im. K. S. Kekelidze (kollektsiya K). Tbilisi, 1969.

Abu'l-Faraj (No 633)

1. Historia compendiosa dynastiarum authore Gregorio Abul-Pharajio Malatiensi Medico, Arabice edita et latina versa ab Eduardo Pocockio. Ox., 1663.
2. Des Gregorius Abulfaradsch kurze Geschichte der Dynastien oder Auszug der allgemeinen Weltgeschichte besonders der Geschichte der Chalifen und Mogolen. Übers. von Georg Lorenz Bauer. 1-2. Lpz., 1783-1785.
3. Gregorii Alpharagii sive Barhebraei Chronicon Syriacum e codiciis Bodleianis descripsit maximam partem vertit notisque illustravit Paulus Iacobus Bruns, edidit ex parte vertit notasque adiecit Georgius Guilelmus Kirsch. Lipsiae, 1789.
4. Gregorii Barhebraei Chronicon ecclesiasticum. Ed. et trad. J.B.Abbeloos et T.J.Lamy. 1-3. Parisiis - Lovanii, 1872-1877.

5. Oeuvres Grammaticales d'Aboul Faradj dit Bar Hebreus. Éd. Abbé Martin. 1-2. P., 1872.
6. Barhebraeus. Ta'rikh mukhtasar al-duwal. Nashara A.Salhani, Beirut - Beyrouth, 1890; Beyrut, 1958.
7. Gregorii Barhebraei Chronicon syriacum. Ed. P.Bedjan. P., 1890.
8. Gregorii Barhebraei Ethicon seu moralia. Ed. P.Bedjan. P., 1898.
9. Gregorii Barhebraei Nomocanon. Ed. P.Bedjan. P.- Lpz., 1898.
10. Laughable Stories Collected by Mar Gregory John Barhebraeus. Syriac Text with English Trasl. by E.A.Budge. L., 1898.
11. Abulfaragi Gregorii Barhebraei Mafriani Orientalis Kithabha dhiyawna seu Liber columbae. Romae, 1898.
12. Le livre de l'ascension de l'esprit sur la forme du ciel et de la terre. Cours d'astronomie rédigé en 1279 par Grégoire Aboulfarag, dit Bar Hebraeus, publié pour la première fois d'après les manuscrits de Paris, d'Oxford et de Cambridge par F.Nau. P., 1899.
13. Bar Hebraeus. Book of the Dove, together with Some Chapters from his Ethikon, transl. by A.J.Wensinck. Leiden, 1919.
14. Mukhtasar fi `ilm al-nafs al-insaniyya li-Ghrighuryus Abi'l-Faraj al-ma`ruf bi-Ibn al-`Ibri. Sahahahi wa `allaqa `alayhi al-qass Bulus Sbat. al-Qahira. Traité sur l'âme par Bar-Hebraeus mort en 1286. Texte arabe publié pour la première fois d'après deux manuscrits conservés dans la Bibliothèque de Manuscrits Paul Sbath et annoté par le p. Paul Sbath. Le Caire, 1928.
15. Le Candélabre des sanctuaires de Grégoire Aboulfaradj dit Barhebraeus. Éd. et trad. par Jan Bakos. - Patrologia Orientalis. 22, No 4, 1930, 489-628, 24, No 3, 1933, 295-439.
16. Gregory Abu'l-Faraj Barhebraeus. The Chronography. 1. Transl. E.A.W.Budge. 2. Syriac Text. L., 1932, Amsterdam, 1976.
17. The Abridged Version of "The Book of Simple Drugs" of Ahmed ibn Muhammed al-Ghafiqi by Gregorius Abu'l-Farag (Barhebraeus). Ed. with an English transl., comm., and indices by M.Meyerhof and G.P.Sobhy bey. Cairo, 1933-1940.
18. Ebulferec Ibnulibri. Tarihi Muhtasaru'd-Duvel, translated into Turkish by Şerefeddin Yaltkaya. Istanbul, 1941.
19. Barhebraeus. De l'ame raisonnable. Éd. et trad. par J.Bakos. Leyde, 1948.
20. Kniga zanimatel'nykh istoriy. Per. s siriyskogo, prim. i poslesloviye A.Belova i L.Vil'skera, red. i predisloviye N.V.Pigulevskoy. Lg., 1957; M.-Lg., 1961; Rasskazy, osve-zhayushchiye razum i izgonyayushchiye pechal'. Lg., 1972, 99-268.
21. Le Candélabre du sanctuaire de Grégoire Aboulfaradj dit Barhebraeus. Troisième base de la théologie. Éd. et trad. par F.Graffin. - Patrologia Orientalis. 27, 1957, No 4, 457-626.
22. Smishni opovidki. Pereklav Evgen Varda. Kyyiv, 1972.
23. Grigoriy Yuhannan Bar Ébraya. Nravouchitel'nyye rasskazy. Per. K.P.Matveyeva. M., 1985.

Abu'l-Fida (No 680)

1. Abulfedae Annales muslemici arabicè et latine studiis J.J.Reiskii. Ed. J.G.Chr.Adler. 1-5. Hafniae, 1789-1794.
2. Mukhtasar ta'rikh al-bashar. 1-2. Istanbul, 1286-1287 h. [1869-1870].
3. Géographie d'Aboulféda. Trad. par M.Reinaud et St.Guyard. 1-2. P., 1848, 1883; reéd. par Fuat Sezgin. F.M., 1985.
4. Geographie d'Aboulféda, texte arabe par M.Reinaud et Mac Guckin de Slane. P., 1870; re-ed by Fuat Sezgin. F.M., 1985.
5. Abul'feda. Geograficheskoye opisaniye Aravii, glava iz "Geografii" - Takvim al'-bul'dan. Per. i predisloviye L.Vyshnegorskogo. - Pravoslavnyy sobesednik. Kazan', 1890, No 4, 503-523.

Abu Ma'shar (No 88)

1. Introductorium in astronomiam Albumasaris Abalachi. Ed. Erhard Ratdolt. Augsburgi, 1489; Ed. Jacobus Pentius Leucensis. Venetiis, 1506.
2. Albumasaris de revolutionibus nativitatum. Ed. D.Pingree. Lpz., 1968.
3. al-Madkhal al-kabir ila `ilm ahkam al-nujum. The Great Introduction to the Science of Astrology. With Introduction in Arabic and English by Fuat Sezgin. F.M., 1985.

Abu Muqri (No 722)

1. M. el-Moqri. Les mansions lunaires des Arabes. Publ., trad. et annoté par A. de C. Motylinski. Alger, 1899.

Abu Rida, `A. and Ibrahim ibn Sayyar

1. Al-Nazzam wa ara'uha al-kalamiyya al-falsafiyya. al-Qahira, 1365 h. [1946].

Abu Rida, Muhammad `Abd al-Hadi

1. Al-Ghazali und Widerlegung der griechischen Philosophie (Tahafut al-Falasifa). Madrid, 1952.
2. Thalatha rasail falsafiyya li-Jabir ibn Hayyan. ZGAIW. I, 1984, 50-67.
3. Risalatan falsafiyyatan li-Jabir ibn Hayyan. ZGAIW. 2, 1985, 75-84.

Abu'l-Salt (No 431)

1. Rectification de la mente. Texto arabe, trad. por A.G.Palencia. Madrid, 1915.

Abu'l-Wafa (No 256)

1. Kniga ó tom, chto neobkhodimo remeslenniku iz geometricheskikh postroyeniy. Per. i prim. S.A.Krasnovoy. - FMSV. I, 1966, 56-140.
2. Al-Madkhal al-hifzi ila sina`a al-arithmatiqi. Nashara Ahmad `Ali Salih. Baghdad, 1391 h. [1971].
3. Ma yahtaju ilayhi al-sani` min `ilm al-handasa. Nashara Salih Ahmad al-`Ali. Baghdad, 1391 h. [1971].

Adharnush, Adhartash

1. Ta'rikh wa farhang-i kuhni Iran dar 'al-Athar al-baqiyya". - "al-Biruni" [10], 1973, 164-242.

Adnan (Adıvar), Abdulhak (1882-1955)

1. La science chez les Turcs Ottomans. P., 1939.
2. Ali Kuşçu. - IA. 1, 1950, 321-323.
3. Farabi. - IA. 4, 1956, 451-469.
4. Harizmi. - IA. 5, 1958, 258-262.
5. Ibn Bacce. - IA. 5, 1958, 704-707.
6. Ibn Haldun. - IA. 5, 1958, 738-743.
7. Ibn Meymun. - IA. 5, 1958, 772-774
8. Ibn Tufeyl. - IA. 5, 1958, 829-831.
9. Ibn Heysem. - IA. 5, 1958, 859-861.
10. Osmanlı Türklerinde İlim. Istanbul, 1970.

Afdali, Muhammad A`zam

1. Fihrist-i nusukh khatti-yi Arshif-i milli-yi Afghanistan 1. Bibliography of the Manuscripts of the National Archives of Afghanistan. 1. Kabul, 1985.

Afdali, Muhammad A`zam and Hayyir, Muhammad Anwar

1. Fihrist-i nusukh khatti-yi Arshif-i milli-yi. Afghanistan 2:1. Bibliography of the Manuscripts of the National Archives of Afghanistan 2:1. Kabul, 1986.

Afnan, Soheil M.

1. Avicenna: His Life and Works. L., 1958.

Afshar, Iraj

1. Kitabshinasi fihristha-yi nuskhaha-yi khatti-yi farsi dar kitabkhanaha-yi dunya. Tehran, 1337 s.h. [1958].
2. Kitabkhanaha-yi Iran, guzarish-i dar barayi kitabkhanaha-yi `umumi wa madaris. Tehran, 1343 s.h. [1964].
3. Text and Translation of Saydanah and its Manuscripts. - "al-Biruni" [9], 1979, 423-427.

Afshar, Iraj, Danish-Pazhuh, M.T., and Munzawi A.

1. Fihrist-i kitabkhana-yi Majlis-i Shawra-yi Milli. Tehran. 11-15, 1344-1347 s.h. [1965-1968].

Agahi, Abdul Huseyn Mamed

1. Suhrawardi. - FE. 5, 1970, 166.

Aghargun, Ahmet G. and Fletcher, Colin R.

1. Al-Farisiand the Fundamental Theorem of Arithmetic. - HM. 21, 1994, 162-173.

Aghayev, Ismail Ali oghlu

1. K voprosu ob antikreatsionistskoy napravlennosti kosmologii i antropologii "Brat'yev chistoty". - DAN Azerb. SSR. 40, 1984, No 3, 81-83.
2. Allegoricheskoye tolkovaniye religioznykh dogm i ucheniye o sootnoshenii very i znaniya v entsiklopedii "Chistykh brat'yev". - DAN Azerb. SSR. 41, 1985, No 4, 68-72.

3. K voprosu o svyazi ucheniya "Chistykh brat'yev" s ismailizmom. - Materialy III nauchnoy konf. molodykh vostokovedov. Baku, 1985, 92-94.
4. Ratsionalizm kak vyrazheniye svobodomysliya v filosofii Brat'yev Chistoty. - ADK (fs), Baku, 1985.
5. Hawl `ilaqa al-tanasib ma bayna'l-iman wa'l-ma`rifa `inda "Ikhwan al-Safa". - AJ. 2, 1987, 214-222.

Aghayeva, Surayya Khosrov qyzy

1. K voprosu o biografii Abdulgadira Maragi. - IAN Azerb. SSR, ser. lit., yaz. i ist. 1974, No 3, 90-96.
2. Abdulgadir Maragi i yego muzykal'no-teoreticheskoye naslediye. ADK(iv). M., 1979.
3. Iz istorii muzykal'noy kul'tury Azerbayjana (Abdulgadir Maragi). - Muzyka narodov Azii i Afriki. M., 1980, 243-260.

Ahadova, Muhabbat Ahad qizi

1. Traktat Abu Ali Ibn Siny "Merilo razuma". - Voprosy yestestvennykh nauk. Nauchnyye trudy Tashkentskogo gos. universiteta i Bukharskogo gos. ped. instituta. 18(4). Tash., 1962, 356-398.
2. Urta Osiyoning mashhur matematiklari. Toshkent, 1964.
3. Arifmeticheskaya chast' "Knigi znaniya" Ibn Siny. - Uch. zap. Bukharskogo gos. ped. instituta. 12, 1964, 263-281.
4. Geometricheskaya chast' "Knigi znaniya" Ibn Siny. - Uch. zap. Bukharskogo gos. ped. instituta. 13, 1964, 143-205.
5. Fiziko-matematicheskiye sochineniya Ibn Siny na tajikskom yazyke. ADK(fm). Tash., 1965.
6. Primeneniye dvizheniya v geometrii v rabotakh matematikov srednevekovogo Vostoka. - Nauch. trudy Bukharskogo gos. ped. instituta. 4, 1967, 76-81.
7. Traktat Abu Ali ibn Siny "Merilo razuma". - "Iz istorii" [2], 1972, 42-57.
8. Umar Khayyom - matematik olim. Toshkent, 1972.
9. Beruniy wa uning matematikaga oid ishlari. Toshkent, 1976.
10. Ibn Sina wa fizika-matematika fanlari. Toshkent, 1980.
11. O nekotorykh fiziko-matematicheskikh trudakh Ibn Siny - "Ibn Sina" [14], 1981, 41-47; "Ibn Sina" [15], 1981, 162-169.

Ahilly, S.

1. Slovar' Mahmuda Kashgharskogo i turkmenskiy yazyk. - Ashkhabad, 1958.

Ahlwardt, Wilhelm

1. Verzeichniss der arabischen Handschriften. 5. Die Handschriften-Verzeichnisse der Königlichen Bibliothek in Berlin. 17. B., 1897.

Ahmad, I. A.

1. The Impact of the Qur'anic Conception of Astronomical Phenomena on Islamic Civilization. - Vistas Astron. 19, 1955, No 4, 395-403.

Ahmad, Imam Ibrahim

1. Al-Biruni's Astronomical Works. - Helwan Observatory Bulletin No 48. Cairo, 1959.
2. The Works of al-Bayrouni. P.II - Helwan Observatory Bulletin No 50. Cairo, 1959.
3. Al-Biruni's Astronomical Works. P.III. - Helwan Observatory Bulletin No 57. Cairo, 1962.

Ahmad, Mukhtar al-Din

1. Al-Kindi and His Treatise on Rays. - ISHAS 1. I, 1977, 83-95, II 1978, 3.

Ahmad, Nafis

1. Muslim Contribution to Geography. Lahore, 1947.
2. A History of Muslim Philosophy. - Geography. 2. Wiesbaden, 1966, 1244-1277.
3. Some Glimpses of al-Biruni as a Geographer. - "al-Biruni" [9], 1979, 141-148.

Ahmad, Sahban and Ansari, S.M.R.

1. On Figurate Numbers in Ibn Sina's Kitab al-Shifa'. - SHMS. 1985, 9, No 1.

Ahmad, Salah and Rashed, R.

1. Préface à Al-Bahir en Algèbre d'As-Samaw'al. - al-Samaw'al [5], 1-84.

Ahmad Khan, M. A.

1. Ibn al-Haitham's Literary Life. - "Ibn al-Haytham" [1], 1970, 294-305.

Ahmedov, Ashraf Ahmed ughli (b. 1939)

1. Geometricheskiy traktat Shamsiddina Samarkandi (13th c.). - IAN Uz. SSR, ser. fiz.-mat. nauk. 1969, No 3, 3-7.
2. Izlozheniye osnov geometrii na srednevekovom Vostoke. - IAN. Uz. SSR, ser. fiz.-mat. nauk. 1969, No 5, 3-6.
3. Voprosy obosnovaniya geometrii na srednevekovom Vostoke. - ADK(fm). Tash., 1970.
4. Avtor rimskogo izdaniya "Nachal" Yevklida. - IAN Uz. SSR, ser. fiz.-mat. nauk. 15, 1971, No 5, 9-12.
5. Traktat Shamsiddina Samarkandi "Obosnovannyye predlozheniya". - "Iz istorii" [2], 1972, 20-42.
6. Geometricheskaya chast' sochineniya Abu Bakra ibn Khalila. - "Iz istorii" [2], 1972, 13-19.
7. Geometricheskiy traktat Shams ad-Dina as-Samarkandi. - Nauch. trudy Tashkent. gos. universiteta. 418. Voprosy matematiki, 1972, 35-51, 376-377.
8. Beruniyning "Konuni Mas'udiy" asarida matematika wa sferik astronomiyaning ayrim masalalari. - "al-Biruni" [8], 1973, 111-122.
9. "Qonuni Mas'udiy"ning astronomik maqolalar. - al-Biruni [48], 1976, 10-36.
10. "Kniga ob izvlechenii rebra kuba" al-Hasana ibn al-Haysama. - "Matematika Vostoka" [1], 1977, 113-117.
11. O kommentariyakh `Abd al-`Ali Husayna Birjandi k "Ziju" Ulugbeka. - "Iz istorii" [3], 1979, 110-129.
12. Ibn Sina i voprosy obosnovaniya geometrii. - "Ibn Sina" [8], 1980, 183-189.
13. Abu Ali Sinoga zamondosh matematik wa astronomlar. - "Ibn Sina" [9], 1980, 99-112.
14. Ibn Sina i "Al'magest" Ptolemeya. - "Ibn Sina" [12], 1981, 142-147.
15. O "Zije" al-Khorezmi. - al-Khwarizmi [13], 1983, 5-18.
16. Istochniki "Zija" al-Khorezmi. - al-Khwarizmi [13], 1983, 18-20.
17. "Zij" al-Khorezmi v posleduyushchiye stoletiya. - al-Khwarizmi [13], 1983, 21-24.
18. Traktat ob iudeyskom kalendare. - al-Khwarizmi [13], 1983, 24-25.
19. Khorazmiy ijodida matematik fanlar. - al-Khwarizmi [14], 1983, 5-56.
20. Khorazmiyning eralar hakidagi risolasi. - al-Khwarizmi [14], 1983, 209-211.
21. Khorazmiy wa geografiya fani. - al-Khwarizmi [14], 1983, 225-291.
22. Teoriya dvizheniya planet v "Zije" al-Khorezmi. - ONU. 1983, No 7, 59-64.
23. Muhammad al-Khorezmi - istorik. - ONU. 1983, No 11, 51-55.
24. "Kniga kartiny Zemli" al-Khorezmi. - "al-Khwarizmi" [4], 1985, 201-206.
25. Nauchnoye naslediye al-Khorezmi i yego mesto v istorii nauki i kul'tury. - ADD(i). Tash., 1985.
26. Svedeniya o tyurkoyazychnykh narodakh v "Knige kartiny Zemli" al-Khorezmi VIII-IX vv. - "Istoriko-kul'turnyye kontakty narodov altayskoy yazykovoy obshchnosti". M., 1986, 13-14.
27. Etnograficheskiye svedeniya al-Khorezmi v "Knige kartiny Zemli". - ONU. 1987, No 3.
28. Ulughbek. Toshkent, 1991.
29. Traktaty al-Khorezmi ob opredelenii azimutov i vremeni. - "Materialy" [3]. 1991, 155-200.
30. Fragmenty iz Zija Ulugbeka. - "Materialy" [3]. 1991, 217-250.
31. Velikiy entsiklopedist epokhi srednevekov'ya. - ONU. 1994, No 7, 4-10.
32. New Information about Scientisis of Samarkand Astronomical School of Ulugh Beg. - ACIHS XX, 1997, 36.

Ahmedov, A. A. and Bulgakov, P. G.

1. Sredneaziatsko-indiyskiye svyazi v oblasti tochnykh nauk. - "Iz istorii" [5], 1986, 24-33.

Ahmedov, A. A., and-Dabbagh, J. and Rosenfeld, B. A.

1. Istanbul Manuscripts of al-Khwarizmi's Treatises. - Erdem, 3, 1987, No 7, 163-186.
2. Harezmi'nin eserlerinin İstanbul yazmaları. Translated by Melek Dosay. - Erdem, 3, 1987, No 7, 187-210.
3. Makhtutat rasail al-Khwarizmi fi Istanbul wa Tashkand. - AJ. 3, 1989, 48-74.

Ahmedov, A. A. and Jalilova, R.

1. Sredneaziatskiy astronomicheskiy traktat XIII veka. - "Iz istorii" [4], 1983, 54-66.

Ahmedov, A. and Rosenfeld B.A.

1. Kto byl avtorom "Traktata ob opredelenii sinusa odnogo gradusa"? - ONU. No 10, 1975, 51-53.
2. "Kartografiya" - odno iz pervykh doshedshikh do nas sochineniy Beruni. -"Matematika Vostoka" [2], 1978, 127-153.
3. Kto izobryol astrolyabiyu "zarkala"? - ONU. 1981, No 8, 47-48.
4. Neizvestnyye traktaty al-Khorezmi. - ONU. 1984, No 2, 45-47.

5. The mathematical treatise of Ulugh Beg.- Science in Islamic Civilisation. Istanbul, 2000, 143-150.

Ahmedov, A. A., Rosenfeld, B. A., and Sergeyeva, N. D.
1. Astronomicheskiye i geograficheskiye trudy al-Khoirezmi. - "al-Khwarizmi" [1], 1983, 141-191.

Ahmedov, Buri Ahmed ughli
1. Ulughbek. Toshkent, 1965.
2. Ulugbek i yego istoricheskiy trud "Tarikh-i arba' ulus". - ONU. 1994, No 7, 10-15.

Ahmedov, M.
1. Al'-Farabi i muzykal'noye iskusstvo. - "al-Farabi" [4], 1975. 97-99.

Ahmedov, Saidamin Ahmed ughli
1. Prepodavaniye arifmetiki i stupeni yego razvitiya v Sredney Azii. ADK(p). Tash., 1962.
2. O neopublikovannykh rukopisyakh srednevekovykh vostochnykh matematikov. - Uch. zap. Tashkent. gos. ped. instituta. 62. Voprosy metodiki prepodavaniya matematiki, 1966, 5-11.
3. Urta Osiyoda matematika taraqqiyoti wa uni uqitish tarikhidan. Toshkent, 1977.

Ahrens, W.
1. Studien über die magischen Quadrate der Araber. - Der Islam. 7, 1917, 186-250.
2. Die magischen Quadraten al-Buni's. - Der Islam. 12, 1922, 157-177; 14, 1925, 104-110.

al-Ahwani, Ahmad Fuad
1. Kitab al-Kindi fi'l-falsafa al-ula. al-Qahira, 1948.
2. Ibn Sina. al-Qahira, 1958.
3. Al-Kindi faylasuf al-`arab. al-Qahira, 1964.

A`idi, Muhammad Salah
1. Fihris makhtutat Dar al-kutub al-Zahiriyya. Riyadiyyat. Dimashq, 1393 h. [1973].

al-Akfani (No 703)
1. A Survey of the Muhammedan Sciences. Ed. A.Sprenger. Calcutta, 1849.
2. Irshad al-qasid. Beirut, 1322 h. [1904].

al-Akhdari (No 984)
1. al-Durra al-bayda. al-Qahira, 1306 h. [1889].
2. al-Siraj fi `ilm al-falak. al-Qahira, 1314 h. [1896-1897].

Akhvlediani, Vladimir Grigoris dze
1. Foneticheskiy traktat Avicenny (Abu Ali ibn Sina). Tekst, per., issledovaniye. Tbilisi, 1966.
2. O yazykovedcheskom nasledii Ibn Siny. - "Ibn Sina" [8], 1980, 201-212.
3. Foneticheskaya kontseptsiya Ibn-Siny. IAN Taj. SSR, otd. obshch. nauk. 1980, 3, 31-36.

Akimushkin, Oleg Fyodorovich, Kushev, Vladimer Vasil'yevich, Miklukho-lay,N.D. Muginov , A.M., and Salahetdinova, M.A.
1. Persidskiye i tajikskiye rukopisi Instituta narodov Azii AN SSSR. 1-2. M., 1964.

Aktepe, M. Münir
1. Taşköprizade. - IA. 13, 1971, 42-44.

Alavi, Ziauddin
1. Arab Geography in the 9th and 10th centuries. Aligarh, 1965.

Alarcon, M., and Palencia, A. Gonzales
1. Apendice a la edicion Codera de la 'Tecmila" de Ibn al-Abbar. - Miscelanea de Estudios y Textos Arabes. Madrid, 1915, 146-690.

Albin, Michel
1. Astrologies: chinoise, indienne, arabe, hebraïque et occidentales. P., 1985.

Albuquerque, Louis de

1. Zacuto. - DSB. 14, 1976, 583-584.

Aleksandrovskaya, Ol'ga Andreyevna

1. Mesto "Knigi Kartiny Zemli" al-Khwarizmi v srednevekovoy geograficheskoy traditsii. - "al-Khwarizmi" [4], 1985, 206-211.

Alfonso (14th c.)

1. Meyashsher `aqob (Vypryamlyayushchiy krivoye). Izdaniye i rus. per. G.M.Gluskinoy, komm. G.M.Gluskinoy, S.Ya.Lur'ye i B.A.Rozenfel'da, M., 1983.

Alfonso X (1252-1284)

1. Libros del saber de astronomia del rey D.Alfonso X de Castilla, capilados, anotados y comentados par D.Manuel Rico y Sinobas. 1-5, Madrid, 1863-1867.

Ali, S.A.

1. Al-Biruni, the Scholar and the Writer. - Proc. of the Pakistan Historical Conference. 3, 1953, 243-252.

Ali, Yusuf Ali

1. Al-Biruni's India. - Islamic Quaterly. 1, 1927, 31-35, 223-230, 473-487; "Historical Geography of India", 1993, 141-169.

Alimardanov and Dadalishiyev

1. Ibni Sino az nazari mardum. - IAN Taj. SSR, otd. obshch. nauk. 1980, No 3, 66-74.

Aliqulov, Haydar Aliqul ughli

1. Dawwoniy etikasy. Toshkent, 1969.
2. Sochineniye po etike. XV v. ONU. No 5, 1970, 53-55.
3. Jalaliddin Dawani. - "Iz filosofskogo naslediya" [1], 1972, 234-263.
4. Sharq mutafakkirlari akhloq haqida. Toshkent, 1979.

`Allami, Abu'l-Fadl (No 1047)

1. Ayeen Akbery of the Institutes of the Emperor Akber. Transl. Francis Gladwin. 1-2. L., 1800.
2. A'in-i Akbari. Nashara Blochman. 1-3. Kalkata, 1867-1877; re-ed. by Fuat Sezgin, F.M., 1993.
3. The Ain-i Akbari by Abul Fazl `Allami. 1. Transl. H.Blochmann. Calcutta, 1873, 2-3. Transl. H.S.Jarrett. Calcutta, 1848-1849; 1891-1894; re-ed. by Fuat Sezgin, F.M., 1993.
4. A'in-i Akbari. Lakhnaw, 1298 h. (1881).
5. Ain-i-Akbari of Abul Fazl-i-`Allami. 1-3. Transl. H.Blochmann and H.S.Jarrett, corrected and further annotated by Jadu-Nath Sirkar. Calcutta, 1957-1958.
6. Ain-e Akbari of Abu'l-Fazl Allami. Revised, transl., and ed. by D.C.Phillott, 1-3. Calcutta, 1939-1949.

Allana, G.

1. Abu Raihan Muhammad ibn Ahmad al-Biruni (973 A.D. - 1048 A.D.). A Restless Genius in Search of Knowledge. - "al-Biruni" [9], 1979, 149-157.

Allard, André Henri (b. 1937)

1. Les plus anciennes versions latines du 12e siècle issues de l'arithmétique d'al-Khwarizmi. Histoire des textes suivie de l'édition critique des traités attribués à Adelard de Bath et Jean de Seville, et d'un remaniement de ce dernier. Louvain, 1975.
2. Les algorismes latins issues de l'arithmétique d'al-Khwarismi: identification et classement. Alar. Anzama al-`add al-`ashari al-latiniyya al-mushtaqa min hisab al-Khuwa-rizmi. - ISHAS 2, 1979, Suppl. 1, 92.
3. Al-Khorezmi i proiskhozhdeniye latinskogo algoritma - "al-Khwarizmi" [1], 1983, 53-68.
4. Znakomstvo s arifmetikoy al-Khorezmi posredstvom latinskikh algorizmov. - "al-Khwarizmi" [4], 1985, 101-105.
5. The Arabic Origins and Development of Latin Algorisms in the Twelfth Century. - ASP. 1, 1991, No 2, 233-284.
6. Muhammad ibn Musa al-Khwarizmi. Le Calcul Indien (Algorismus). Histoire de textes, édition critique, traduction et commentaires des plus anciennes traductions latines remaniées du XIIe siècle. P. - Namur, 1992.
7. The Influence of Arabic Mathematics in the Medieval West. - EHAS II, 1996, 539-580.

Allouche and Regragui

1. Catalogue des manuscrits Arabes de Rabat (Bibliothèque Générale et Archives du Protectorat Français au Maroc). Deuxième série (1921-1953). 1-2. P., 1957-1958.

Almagro y Cardenas, A.

1. Catalogo de los manuscritos arabes que se conservan en la Universidad de Granada. Granada, 1899.

Alonso, Manuel Alonso

1. Averroes observador de la naturaleza. - al-Andalus, 5, 1940, 215-230.
2. Teologia de Averroes. Madrid-Granada, 1947.
3. Los `Uyun al-Masail de al-Farabi (teses fundamentales). - Al-Andalus. 23, 1959, No 2, 257-273.

Alqadari al-Daghistani, Mirza Hasan Efendi (1834-1910)

1. Kitab-i Athar-i Daghistan. Baku., 1903.
2. Asari Dagestan (Istoricheskiye svedeniya o Dagistane). Per. A.Gasanova (Alkadarskogo). Sbornik materialov dlya opisaniya mestnostey i plemyon Kavkaza. Mahachqala, 1929, 14-193.

al-Aluchi, `Abd al-Hamid

1. Al-Makhtutat al-`arabiyya fi maktaba Linin bi-Musku. - Al-Mawrid, 2, 1973, No 2, 212-222.

d'Alverny, Marie Thérèse (1903-1991)

1. Notes sur les traductions médiévales d'Avicenne. - Archives d'histoire doctrinale et littéraire du Moyen Age. 19, 1952, 339-358.
2. Les traductions d'Avicenne (Moyen age et Renaissance), - Avicenna nella storia della cultura medioevale, Roma, 1957, 71-90.
3. Avicennisme en Italie. - Oriente e Occidente nel Medioevo: Filosofia e Scienze. Roma, 1971, 117-144.
4. Avicenna latinus. Supplementum. - Archives d'histoire doctrinale et littétaire du Moyen Age. 47, 1972, 321-341.

d'Alverny, M. Th. and Hudry, F.

1. Al-Kindi, De radiis. - Archives d'histoire doctrinale et littétaire du Moyen age. 41, 1974, 139-260.

Alvi M.A. and Abdur Rahman

1. Fathullah Shirazi. A Sixteenth century Indian Scientist. New Delhi, 1968.

Amari, Michele

1. Biblioteca arabo-aicula. 1-3. Torino-Roma, 1880-1881; re-ed. by Fuat Sezgin, F.M., 1993.

Amari, M. and Schiaparelli, C.

1. L'Italia descritta nel "Libro del Re Ruggero" compilato da Edrisi. Testo arabo publicato con versioni e note. Roma, 1883; "Studies on al-Idrisi". 2, 1992, 1-316.

Amid, M.

1. Essai sur la psychologie d'Avicenne. Genève, 1940.
2. Avicenna, Scientist and Philosopher. A Millenary Symposium, L., 1952.

al-`Amili (No 1058)

1. Khulasa al-hisab. Kalkata, 1812.
2. The Khoolasut-ool-hisab; a Compendium of Arithmetic and Geometry; in the Arabic Language, by Baha'e-ood-deen, of Amool, with a Translation into Persian and Commentary by Muoluwee Ruoshun Ulee, of Juonpoor; to Which is Added a Treatise on Algebra, by Nujm-ood-deen Ulee Khan. Calcutta, 1812.
3. Beha-eddin's Essenz der Rechenkunst, arabisch and deutsch von G.H.F.Nesselmann, B., 1843.
4. Tarjama-yi Khulasa al-hisab. Calcutta, 1261 h. [1845], 1282 h. [1865].
5. Khulasat al-Hisab ou Essence du calcul de Beha-eddin Mohammad ben al-Hosain al-Aamouli. Trad. par A.Marre. - Nouv. Ann. de math. 5, 1846, 263-323.
6. al-Kashkul. Tehran, 1266 h. [1850], 1296 h. [1879]; al-Qahira, 1288 h. [1871], 1298h. [1881], 1302h. [1885], 1305 h. [1888], 1318 h. [1900]; Bombay, 1309 h. [1892].
7. Khulasa al-hisab. Istanbul, 1268 h. [1851]; Tehran, 1275 h. [1859]; Tabriz, 1276 h. [1860]; Bombay, 1298 h. [1881], 1314 h. [1896]; Kashmir, 1285 h. [1868], 1299 h. [1882].

8. Baha-Eddin Al Aamoli. Kholaçat Hissab ou Quintessence du Calcul. Trad. per A.Marre. - Atti dell' Accad. Pontif. de'Nuovi Lincei. 19, 1864, 1-61.
9. Haftad bab dar ma`rifat-i asturlab. Tehran, 1316 h. [1898].
10. Khulasa al-hisab. al-Qahira, 1325 h. [1907], 1350 h. [1931]. Tamir Khan Shura, 1328 h. [1910]. Shash (Tashkent), 1334 h. [1915].

Aminrazavi, Mehdi

1. Ibn Sina. - ENWC. 1997, 434-435.

Amin-zade, Ahmed Abdulmamed oghly

1. Ishraq. - FE. 2, 1962, 398-399.
2. Yusuf Karabagi. - Ocherki po istorii azerbayjanskoy filosofii. I. Baku, 1966, 284-289.

Amir-Moèz, Ali Reza [Amir Mu`izz `Ali Rida]

1. Comparison of the Methods of Ibn Ezra and Karkhi. - Scripta Mathematica. 23, 1957, 173-178.
2. Ibn Haitham's Problems and their Geometric Solutions. - Math. Magazine. 30, 1957, 93.
3. A Paper of Omar Khayyam. - Scripta Mathematica. 26, 1961, 323-337.
4. Khayyam and Irrational Magnitudes. - Scripta Mathematica. 38, 1968, 205-208.
5. Khayyam, al-Biruni, Gauss, Archimedes, and quartic equations. - Texas J. Sci. 46, 1994, No 3, 241-257.
6. Khayyām, Hashtroudi, and quartic equations. – Farhang, 12, 2000, No 29-32, 125-131.

"Amphora"

1. Amphora. Festschrift an Hans Wussing on Occasion of his 65th Birthday. Ed. by S.S.Demidov, M.Folkerts, D.Rowe, and Ch.J.Scriba. Basel, 1992.

al-Amuli (No 719)

1. Nafais al-funun fi `arais al-`ulum. Tehran, 1309 h. [1892], 1315-1317 h. [1897-1899].
2. Dragotsennosti nauk. Vvedeniye. Per. P.R.Rajabova. - "Muzykal'naya estetika" [1], 1967, 302-303.

Anawati , Georges Chehata [Qanawati, Jirjiis] (1905-1994)

1. Essai de la Bibliographie Avicennienne. Le Caire, 1950.
2. Mu`allafat Abu `Ali ibn Sina. al-Qahira., 1950.
3. Fakhr al-Din al-Razi. - EI^2. 1, 1963, 302-303.
4. The Kitab al-Jamahir fi Ma`rifat al-Jawahir of al-Biruni. - "al-Biruni" [9], 1979, 437-453.
5. Abubacer [Ibn Tufayl]. - LM . 1, 1980, 70.
6. Abhari Aṯir al-Din. - EIr. 1, 1985, 216-217.
7. Arabic Alchemy. - EHAS. III, 1996, 813-885.

Anawati, G. C., de-Blois, François, Bosworth, E., Lawrence, Bruce B., Pingree, D., and Saliba, G.

1. Biruni Abu Rayhan. - EIr. 4, 1990, 274-287.

Anawati, G. C., Hodl, L., Greive, H., Lauer, H.H.

1. Averroes, Averroismus. - LM. 1, 1979, 1291-1295.

Anawati, G.C. and Iskandar, A.Z.

1. Hunayn ibn Ishaq al-`Ibadi. - DSB. 15, 1978, 230-249.
2. Ibn Sina. - DSB. 15, 1978, 494-501.

Anbuba, `Adil [Anbouba, Adel]

1. al-Karaji. al-Dirasat al-adabiyya. Beirut, 1959.
2. L'Introduction. - al-Karaji [2], 1964, 1-50.
3. al-Ṣamaw'al. - DSB. 12, 1975, 91-95.
4. al-Ṭusi, Sharaf al-Din. - DSB. 13, 1976, 514-517.
5. Qadiyya handasiyya wa muhandisun fi'l-qurun al-rabi` al-hijri "tasbi` al-daira". Construction of the Regular Heptagon by Middle Eastern Geometers of the Fourth (Hijra) Century. - JHAS. I, 1977, No 2, 319, 352-384.
6. Acquisition de l'algèbre par les Arabes et premiers développements. Aperçu général. - JHAS. 2, 1978, No 1, 66-100.
7. Construction de l'heptagone régulier par des Arabes au 4e siècle de l'hégire. - JHAS. 2, 1978, No 2, 264-269.
8. Un traité d'Abu Ja'far [al-Khazin] sur les triangles rectangles numériques. - JHAS. 3, 1979, No 1, 134-178.

9. Mulahiza hawl makhtuta li'l-Uqlidisi. Observation Concerning a Manuscript of al-Uqlidisi. - AH. 3, 1979, No 2, 320-322; JHAS. 3, No 2, 1979, 283-285.
10. Al-Qabisi sahib al-risala fi jam` anwa` min al-a`dad Aya Sufiya 4832, s. 85a-88b. Un mémoire d'al-Qabisi (4ᵉ siècle H.) sur certaines sommations numériques. - JHAS. 6, 1982, No 1-2, 181-208.

al-Andalusi (No 384)

1. Kitab Tabaqat al-Umam ou Les Catégories des Nationa par Abou Qasim Sa'id de l'Andalous. Publié avec notes et tables par P.Louis Cheikho. Beyrouth, 1912.
2. Sa`id al-Andalusi. Kitab Tabaqat al-Umam. Trad. R. Blachère. P., 1935.
3. "Book of the Categories of Nations". Transl. by Sema`an I. Salem and Alok Kumar. Austin, 1991.

Andronov, Ivan Koz'mich (1895-1975) and Sobirov G.S.

1. O matematicheskikh rukopisyakh uchonykh XI-XII vekov Sredney Azii, khranya-shchikhsya v biblioteke prof. Andropova I.K. - Voprosy istirii i metodiki elementarnoy mate-matiki. 2. Dushanbe, 1965, 5-13.

Anonymous

1. al-Ash`ari. - EI. 1, 1913, 499.
1a. Bahmanyar. - EI. 1, 1913, 571.
2. al-Djahiz. - EI. 1, 1913, 1000-1001.
2a. Ibn Badjdja. - EI. 2, 1927, 366.
2b. Ibn Kutlobugha. - EI. 2, 1927, 400.
3. Ibn Sab`in. - EI. 2, 1927, 415.
3a. Ikhwan al-Safa'. - EI. 2, 1927, 459-460.
4. al-Istakhri. - EI. 2, 1927, 560.
5. Ibn Sikkit. - EI^2. 3, 1971, 940-941.
6. Ibn Zur`a. - EI^2. 3, 1971, 979-980.

Ansari, Sheikh Mohammad Razaullah (b. 1932)

1. On the Physical Researches of al-Biruni. - "al-Biruni" [13], 1975, 198-217.
2. A Comparative Study of Astronomical Instruments of Jai Singh and Central Asian School of Astronomy. - "Scientific Changes" [1], 1985, 73-75.
3. A Supplementary Note on Jawahir al-`Ulum-i Humayuni. - SHMS. 9, 1985, Nos 1-2, 65-66.
4. Contents of al-`Urdi's Text: Kitab al-Hay'ah. - SHMS. 13, 1994, No 2, 277-280.
5. On the Transmission of Arabic-Islamic Astronomy to Medieval India. - AIHS. 45, 1995, No 135, 273-297.
6. Modern Scientific Methods in the Works of Ibn al-Haytham. - "Fakhruddin Ali Ahmad Memorial Volume". New Delhi, 1995, 248-271.

Ansari, S. M. R. and Hussain [Husayn], A.

1. Khazinat al-A`dad by Ata ullah Khanqahi and its Main Source: Al-Amili's Hisab, - SHMS. 13, 1994, 225-240.

Ansari, S. M. R. And Sarma, S.R.

1. Ghulam Hussain Jaunpūrī's Encyclopedia of Mathematics and Astronomy. – SHMS, 16, 1999-2000, No 1-2, 77-93.

Anschütz, C.

1. Ueber die Entdeckung der Variation und der jährlichen Gleichung des Mondes. - Zeitschr. für Math. und Physik. Hist.-lit. Abt., 31. 1886, 161-171, 201-219.

al-Antaki (No 1044)

1. Tadhkira uli'l-albab wa'l-jami` li'l-`ajab al-`ujab. al-Qahira, 1308 h. [1891], 1309 h. [1892].

Anvar, Seyyed Abdollah

1. A Catalogue of the Manuscripts in the National Library. 1-2. Tehran, 1965-1968.

Aouad (Awwad), Maroun

1. Les fondements de la "Rhétorique" d'Aristote reconsidérés par Farabi, ou le concept de point de vue immédiat et commun. - ASP. 1, 1991, No 1, 133-150.

Apollonius (ca 262 B.C. -ca 190 B.C.)

1. Apollonii Pergaei Conicorum lib. V, VI, VII paraphraste Abalphato Asphahanensi nunc primum editi. Additus in calce Archimedis Assumptorum liber, ex codicibus arabicis... Abrahamus Ecchellensis... latinos reedidit. Io. Alphonsus Borellus... curam in geometrcis versioni contulit et notas... Florentiae, 1661.
2. Apollonius de Perga. Les coniques. Trad. P.Ver Eecke. Bruges, 1923; P., 1959.
3. Apollonius' Conics Books V to VII. The Arabic Translation of the Lost Greek Original in the Version of the Banu Musa. Ed. with transl. and comm. by G.J.Toomer. N.Y. - B. - Hb., 1990.

al-`Aqqad, `Abbas Mahmud

1. al-Shaykh al-Rais Ibn Sina. al-Qahira, 1365 h. [1946].
2. Ibn Rushd. al-Qahira, 1372 h. [1953], 1377 h. [1957].

"Arabskiye rukopisi"

1. Arabskiye rukopisi Instituta Vostokovedeniya Akademii nauk SSSR. Pod red. A.B. Khalidova. 1-2. M., 1986 (ARIV).

Aram, Ahmad

1. Muhammad ibn Musa Khwarizmi wa atharish. - "al-Khwarizmi" [3], 1984, 1-23.

Arberry, Arthur

1. Avicenna on Theology. L., 1951.
2. A Second Supplementary Handlist of the Muhammedan Manuscripts in the University and Colleges of Cambridge. Cambridge, 1952.
3. Avicenna: his Life and Times. - "Ibn Sina" [3], 1952, 9-28.
4. A Handlist of the Arabic Manuscripts of the Chester Beatty Library. 1. Dublin, 1955.

Archibald, Raymond Clare (1875-1955)

1. Notes of Omar Khayyam (1050-1122) and Recent Discoveries. - The Pi Mu Epsilon J. 1, 1953, 350-358.

"Archimede"

1. Archimede. Mito tradizione di scienza, a cura di Corrado Dollo. Firenze, 1992.

Archimedes (283-212 B.C.)

1. Lemmata Archimedis apad Graecos et Latinos jampridem desiderata e vetuste codice MS. arabice a Joh. Gravio traducta et nunc primum cum arabum scholiis publicata a Samuele Forster. Londini, 1657.
2. Arkhimeda dve knigi o share i tsilindre, Izmereniye kruga i Lemmy. Per. s grecheskogo (Lemmy s latinskogo) F.Petrushevskogo. SPb., 1823.
3. Archimedis opera omnia cum commentariis Eutocii. Ed. J.L.Heiberg. 1-3. Lpz., 1910-1915.
4. Sochineniya. Per. I.N.Veselovskogo, per. arabskikh tekstov B.A.Rozenfel'da. M., 1962.
5. Archimedous Apanta hypo Euangelou Stamate, 1-3. Athenai, 1970-1974.

Arendonk, C. van

1. al-Hamdani. - EI. 2, 1927, 246-247.

1a. Ibn Hawkal. - EI. 2, 1927, 384-386.

2. Ibn Hazm. - EI. 2, 1927, 384-386; 5, 1938, 93-94.

2a. Ibn Khordadhbeh. - EI. 2, 1927, 398-399.

3. Ibn Rosta. - EI. 2, 1927, 410.
4. Ibn Khaldun. - EI. 5, 1938, 94.
5. Hamdani. - IA. 5, 1958, 419-420.
6. Ibn Hazm. - IA. 5, 1958, 748-753.
7. Ibn Ruste. - IA. 5, 1958, 781.

Argelander, Friedrich Wilhelm August (1799-1875)

1. Uranometria nova. B., 1843.

Arif, Aida S. and Abu Hakima, Ahmad M.

1. Descriptive Catalogues of Arabic Manuscripts in Nigeria. Jos Museum and Lugard Hall Library, Kaduna-L., 1965.

Aristotle (384-322 B.C.)

1. Aristotelis Opera omnia. Ex rec. Immanuelis Beckeri. 1-5, B., 1831-1870.
2. The Works of Aristotle, 1-12. Transl. under editorship of W.D.Ross, Ox., 1928-1952.

Aristotle and Ibn Rushd

1. Aristoteles. Omnia, quae extant, opera. Averroes Cordubensis in ea opera omnes qui ad nos pervenere commentarii, 1, Venetiis, 1560, 1574.

Arnaldez, Roger

1. Grammaire et théologie chez Ibn Hazm de Cordoue. P., 1956; 1981.
2. Ibn Hazm. - EI². 3, 1971, 896-899.
3. Ibn Rushd. - EI². 3, 1971, 909-920.
4. The Theory and Practice of Science according to Ibn Sina and al-Biruni. -"al-Biruni" [9], 1979, 428-436.
5. Aspects de la pensée musulmane. P., 1987.

Arnaldez, R. and Iskandar, A. Z.

1. Ibn Rushd. - DSB. 12, 1975, 1-9.

Arnaldez, R., Massignon, L., and Yushkevich A.P.

1. La science arabe. - Histoire générale des sciences, publiée sous la direction de R.Taton. 1. La science antique et médiévale (des origines à 1450), 2ème ed., P., 1966.

Arnold, Thomas Walker

1. Kashifi. - EI. 2, 1927, 846.
2. Kaşifi. - IA. 6, 1953, 413-414.

Arsenashvili, Akaki I.

1. Ob odnoy gruzinskoy matematicheskoy rukopisi XVIII veka. - TNKA XIX(m). 1978, 3-8.

al-Ash`ari (No 158)

1. Kitab maqalat al-Islamiyya wa ikhtilaf al-musallin, bi-tashih H.Rittir. Die Dogmatischen Lehren des Anhanger des Islam von Abu l-Hasan 'Ali ibn Isma'il al-As`ari. Herausg. von H.Ritter. Istanbul, 1929.
2. Maqalat al-Islamyin wa Ihtilaf al-musallin. Herausg. von H.Ritter. Wiesbaden, 1963.

Ashtor, Eliahu

1. Bar Hebraeus (Bar `Ebraya, Ibn al-`Ibri) Johanan (Gregorius or Abu al-Faraj). - EJ. 4, 1972. 222.

Ashurov, Gafar Ashur zoda

1. Filosofskiy traktat Nosiri Khisrava "Zod-al-musofirin". - IAN Taj. SSR, otd. obshch. nauk. 1960, No 2, 53-60.
2. Nasir Khosrov. - FE. 3, 1964, 555-556.
3. Filosofskiye vzglyady Nosiri Khisrova (na osnove analiza traktata "Zod-al-musofirin"). Dushanbe, 1965; ADK(f). Dushanbe, 1965.
4. Abuali Ibn Sina - vydayushchiysya uchonyy srednevekov'ya. - "Ibn Sina" [16], 1981, 5-9.

Ashurov, G. and Devonaqulov, A.

1. Muqaddima. - Ibn Sina [67]. 2, 1980, 5-10.

Ashurov, G. A. and Dinorshoyev, M.

1. Osori muntakhabi Abuali ibni Sino. - Ibn Sina [67]. 1, 1980, 5-14.

Asimov, Muhammad Sayfiddin zoda [Osimi, Muhammad] (1917-1996)

1. Aburayhoni Beruni wa "Kitob-ut-tafhim li-avoili sanoat-it-tanjim"-i u. - al-Biruni [38], 1973, 5-17.
2. Al-Biruni's Astronomical Treatise in the Dari Language. - "al-Biruni" [13], 1975, 254-256, 277.
3. Ibn Sina v istorii mirovoy kul'tury. - Voprosy folosofii. 1980, No 7, 45-53.
4. "Kitob-ush-shifo"-i Abuali Sino. - Ibn Sina [67] (III, 1985, 5-15).
5. The Life and Teaching of Ibn Sina. - IJHS. 21, 1986, No 3, 227-243.

Asimov, M. S. and Yaroshevskiy M. G.

1. Velikiy entsiklopedist i yestestvouspytatel'. - VIYT. 1980, No 4, 72-74.

Asin Palacios, Miguel (1871-1944)

1. Il filosofo Zaragozano Avempace. - Revista de Aragon. 1901, 242-260.
2. Algazel, dogmatica, moral y ascética. Zaragoza, 1901
3. Noticia de los manuscriptos arabes del Sacro Monte de Granada. - Revista del Centro de Estudios Historicos de Granada y su Reino. Granada, 1912.
4. La mystique d'al-Gazzali. - Mélanges de la Faculté Orientale de l'Université St. Joseph. Beyrouth. 7, 1914-1921, 67-103.
5. Abenhazam de Cordoba y su historia critica de las ideas religiosa. Madrid, 1927-1932.
6. El "Libro de los animales" de Jahiz. - Isis. 14, 1930, 20-54.
7. La Espiritualidad de Algazel y su sentido cristiano. Madrid, 1934-1941.

Askari, Kazim Hasan

1. Al-Beruni on the Shifting of the Bed of Amu Darya'. - Islamic Culture. 50, 1976, No 4, 201-210.

Aslam, Mohammad

1. Al-Biruni's Methodology in India. - "al-Biruni" [9], 1979, 329-335.

Asmus, Valentin Ferdinandovich (1894-1975)

1. Abu Ali Ibn-Sina. - Novyy mir. 1952, No 6, 188-196.

Assani, Djamil

1. Le mathématicien Eugène Dewulf (1831-1896) et les manuscrits médiévaux du Maghreb. HM. 23, 1996, No 3, 257-268.

Assemani, Stephanus Evodius [al-Samani] (1707-1782)

1. Bibliothecae Mediceae Laurentianae et Palatinae codicum manuscriptorum orientalium catalogus. Florentiae, 1742.
2. Catalogo dei codici dei manoscritti orientali della Biblioteca Naniana. 1-2. Patavii, 1787.

Assfalg, Julius

1. Barhebraeus (Grigor bar `Ebraya). - LM. 1, 1979, 1461.
2. Eliya bar Sinaya. - LM. 3, 1986, 1845.

al-Asturlabi (No 47)

1. Kitab al-`amal bi'l-asturlab. Bi-nashra al-ab Luis Shaykhu al-yisu`i. L'astrolabe et la maniere de s'en servir: traité de `Ali ibn `Isa. Ed. P.L.Cheikho. - al-Mashriq. 16, 1913, No 1, 29-46.
2. Ali ibn Isa. Das Astrolab und sein Gebrauch. Übers. von S.Schoy. - Isis. 9, 1927, 239-254; Schoy [38], 2. 613-628.

Atagharryyev, Muhammed Nazar

1. "Traktat o raz"yasnenii ploshchadi ploskikh figur" Rukopisnogo fonda AN Turkm. SSR. - TNKA XII(m). 20-22, 1981, 13-22.
2. "Kosmografiya" al-Turkumani. - IAN Turkm. SSR, ser. fiz.-tekh., khim. i geol. nauk. 1983, No 6, 103-105; IAI. 17, 1984, 155-160.
3. Istoriya astronomii v Turkmenistane. - Ashkhabad, 1984.
4. Voprosy matematicheskoy geografii v astronomicheskom traktate Kamal ad-Dina at-Turkumani. - IAN Turkm. SSR, ser. ist. i filol. nauk. 1984, No 1, 53-59.
5. Resheniye odnoy astronomicheskoy zadachi s pomoshch'yu konformnogo otobrazheniya v rabotakh chetyryokh uchonykh srednevekovogo Turkmenistana. - IAN Turkm. SSR, ser. fiz.-tekhn., khim. i geol. nauk. 1983, No 6, 105-110.
6. Primeneniye stereograficheskoy proyektsii k opredeleniyu azimuta kybly: al-Biruni, al-Chagmini, al-Turkumani. - IMI. 29, 1985, 44-47.
7. Fiziko-matematicheskiye nauki v trudakh sredneaziatskikh uchonykh al-Chagmini i al-Turkumani. - ADK(fm). Tash., 1985.
8. Voprosy geometrii v kosmograficheskom traktate at-Turkumani. - TKNA XIII-XVI (m). 1986.
9. Vydayushchiysya sredneaziatskiy uchonyy XII v. Abd al-Jabbar al-Kharaki. - IAN Turkm. SSR, ser. fiz.-tekh., khim. i geol. nauk. 1989, No 5, 102-107.

Atagharryyev, M. N. and Halimov, Nazar

1. Voprosy matematiki i fiziki v traktate turkmenskogo astronoma XIV v. Kamal al-Dina al-Turkmani, napisannom v stolitse Zolotoy Ordy. - TNKA XII(m). 20-22, 1981, 23-27.
2. Geometricheskiy traktat al-Taftazani. - TNKA XII(m). 20-22, 1981, 28-32.

Atagharryyev, M. N. and Khayretdinova, N. G.

1. O matematicheskikh i astronomicheskikh trudakh Abu'l-Hasana al-Nasawi. - IAN Turkm. SSR, ser. fiz.-tekh., khim. i geol. nauk. 1984, No 2, 107-111.

Atalay, B.

[1] Divanil Lugat-it-Türk tercümesi. Ankara, 1939-1941.

Atayev, Ulugbek

1. Kommentarii Qazi-Zade Rumi k astronomicheskomu traktatu Nasireddina at-Tusi. - TSGU. 229, 19 72, 124-127.

Ateş, Ahmet

1. Farabinin eserlerinin bibliyografyası. - TTKW. 15, 1951, 175-192.
2. Konya kütüphanelerinde bulunan bazı muhim yazma eserler. - TTKW. 16, 1952, 49-130.
3. Kastamonu Genel kitaplığında bulunan bazı mühim arapça ve farsça yazmalar. - Oriens. 5, 1952, 28-46; "Handschrifteni" [I] 3. 1986, 827-872.
5. Al-Makhtutat al-`arabiyya fi maktabat Anadul. - MMMA. 4, 1958, 1-4.
6. Ömer Hayyam. - IA. 9, 1966, 472-480

Atieh, George N.

1. Al-Kindi, the Philosopher of the Arabs. Rawalpindi, 1966.
2. Al-Kindi. - ENWC. 1997, 483-484.

Atik, Youssef

1. L'épitre d'algèbre de Sinan Ibn al-Fath. - "al-Multaqi" [2], 1995, 5-19, A178.

Aubier, Catherine

1. Astrologie arabe. P., 1987.

Auluck, F.C.

1. Al-Biruni. An Introduction to his Life and Writings on the Indian Sciences. New Dehli, 1971.
2. Al-Biruni and Indian Astronomy. - "al-Biruni" [12], II, 1976, 513-533.

Aumer, J.

1. Die arabischen Handschriften der Königl. Hof- und Staatsbibliothek in München. München, 1866; "Handschriften" [2], 2, 1987, 1-510.
2. Die persischen Handschriften der Königl. Hof- und Staatsbibliothek in München, 1866.

"Averroes, Maimonide"

1. Averroes, Maimonide - deux grands esprits du XII^e^ siècle. Paris, 1986 (Unesco).

Avi-Jonah, Reuven S.

1. Ptolemy vs al-Bitruji: a Study of Scientific Decisionmaking in the Middle Ages. - AIHS. 35, 1985, 124-147.

Avneri, Zvi

1. Ibn Waqar. EJ. 8, 1972, 1206.

Awa, Adel

1. L'Ésprit critique des "Frères de la pureté" - encyclopédistes arabes du IV^e^/X^e^ siècle. Thèse. Beyrouth, 1948.

`Awwad, Gurgis

1. Khazain al-kutub al-qadima fi'l-`Iraq. Baghdad, 1948.
2. Makhtutat maktaba al-Mathaf al-`Iraqi bi-Baghdad. - MMMA. I, 1955, 37-48.
3. Ya`qub ibn Ishaq al-Kindi, hayatihi wa atharihi. Baghdad, 1382 h. [1962].

4. Fihrist al-makhtutat al-`arabiyya fi khizana Qasim Muhammad al-Rajab bi-Baghdad, 1-2, Baghdad, 1384-1385 h. [1965-1966].
5. Fihrist makhtutat khizana Ya`qub Sarkis al-muhdat ila Jami`a al-hilma bi-Baghdad, Baghdad, 1385 h. [1966].

al-`Ayib, `Ali

1. Precise Measurements in Ibn al-Haytham's Treatise on Geography. - "al-Multaqi" [2] 1995, A68-86.

Ayni, Kamol Sadriddin zoda

1. Nosiri Khisraw Qabodiyoni (Qubodiyoni). - Nasir-i Khusraw [16], 1957, 7-35.
2. Tarihchai paydoishi yak nuskha-yi hatti-yi nodiri "Tatimmat al-Najot"-i Abuali ibni Sino wa tarjimai on. Sukhani dar barayi yak nuskha-yi khatti-yi nadir-i "Tatimma al-Naja"-yi Abu `Ali ibn Sina. - Ibn Sina [51], 1980, 10-14, 3-9.

Ayni, Sadriddin (1878-1954)

1. Shaykhurrais Abuali Sino. Stolinabod, 1939, 1941, 1953.

Azimjanova, Sabahat Azimjan qizi (b. 1922)

1. Vostochnyye rukopisi Instituta Vostokovedeniya AN Uz. SSR i ikh izucheniye. - Trudy Instituta Vostokovedeniya. 3. Tash., 1954.
2. Ali Rais wa uning "Mir"otul mamolik" asari haqida. - Sidi Rais [2], 1963, 5-37.
3. Indiiyskiy divan Babura. Tash., 1966.
4. Beruni i Babur ob Indii. - "al-Biruni" [5], 1972, 89-97.
5. Abu Rayhon Beruniy wa Bobir nazarida Hindiston. - "al-Biruni" [6], 1973, 95-106.
6. Gosudarstvo Babura v Kabule i v Indii. M., 1977.
7. "Babur-name" kak istochnik po istorii kul'tury narodov Vostoka. - "Iz Istorii" [5], 1986, 64-75.

Azimjanova, S.A. and Baykova, Natal'ya Borisovna (1894-1964)

1. Suz boshi. - Gulbadan begim [2], 1959, 5-23.

Azimjanova, S.A. and Qayumov, Aziz

1. Zahiriddin Bobir wa uning izhodiyoti. - Babur [15], 1965, 5-22.

Azimjanova, S.A. and Voronovskiy, D.G.

1. Sobraniye vostochnykh rukopisey AN Uzbekskoy SSR. - "Vostokovednye fondy" [1], 1963, 110-127.

al-`Azzawi, `Abbas

1. Ta'rikh `ilm al-falak fil-`Iraq wa `alâqâtuhu bi'l-aqtar al-islamiyya wa'l-`arabiyya fi'l-uhud al-talia li-ayam al-`Abbasiyya min sana 656 h. [1258] ila sana 1335 h. [1917]. History of Astronomy in Iraq and its Relations with Islamic and Arab Countries in the Post-Abbasid Periods. Baghdàd, 1959 (TIFI).
2. al-Faylasuf al-`arab Ya`qub ibn Ishaq al-Kindi. al-Qahira, 1963.
3. Mathematicians and Astronomers of Iraq. - Sumer, 1972, No 1-2, 201-232.

al-`Azzawi, Salih Mahdi

1. al-Farabi, hayatihi wa shi`rihi. - "al-Farabi" [3], 1975, 141-146.

Baarmann, J.

1. Ibn al-Haitams Abhandlung über das Licht. - ZDMG. 36, 1882, 195--230.

Babayev [Boboyev], Nu`man Bobo zoda

1. Huseyn Birjandi - velikiy uchonyy i kommentator astronomicheskikh i matematicheskikh nauk XV-XVI vv. - "Voprosy istorii i metodiki elementarnoy matematiki". 3. Dushanbe, 1967, 30-34.

Babayev, N. B. and Sobirov, G. S.

1. O trigonometricheskikh tablitsakh Saway Jay Singa. - "Voprosy istorii i metodiki elementarnoy matematiki". 3. Dushanbe, 1967, 40-64.

Babinger, Franz (1898-1967)

1. Die Geschichtsschreiber der Osmanen und ihre Werke. Leiden, 1927; Lpz., 1929. (GOW)
2. New`i. - EI. 3, 1936, 779; EI². 8, 1995, 8-9.
3. Piri Reis. - EI. 3, 1936, 1070-1071.

4. Sinan Pasha, Khodja. EI. 4, 1934, 463-464.
5. Tashköprüzade. - EI. 4, 1934, 747.

Babur (No 944)

1. Life of Baber, Emperor of Hindostan, Written by Himself and Translated from the Jaghatai Toorki by J.Leiden and W.Erskine. L., 1826, 1840.
2. Baber-Nameh Djagataice ad fidem codicis Petropolitani, ed. N.Ilminski. Casane, 1857. Baber-name ili Zapiski sultana Babera, izdany v podlinnom tekste I.I. [I.Il'minskim]. Kazan', 1857.
3. Mémoires de Baber (Zahir-ed-din Mohammed). Trad. par A.Pavet de Courteille. P., 1871.
4. The Babar-nama, Being the Autobiography of the Emperor Babar Written in Chaghatay Turkish, Belonging to the Late Sir Salar Jang of Haydarabad and Ed. by A.S.Beveridge. Leyden, L., 1905.
5. A Collection of Poems by the Emperor Babur. Ed. by E.Denison Ross. Calcutta, 1910.
6. Sobraniye stikhotvoreniy imperatora Babura. Izd. A.S.Samoylovich. Petrograd, 1917.
7. Memoirs of Zehir-ed-Din Muhammed Babur, Emperor of Hindustan, Written by Himself in the Chaghatai Turki. Transl. by John Leyden and William Erskine, Annotated and Revised by Sir Lucas King. 1-2. L.-Edinburgh, 1921.
8. Gazi Zahirüddin Muhammed Babur. Vekayi, Babur'un hatıratı. Doğu Türkçesi'nden çeviren Reşit Rahmeti Arat. - TTKY. (2), 5a-5b, 1943-1946.
9. Lirika. Per. L. Pen'kovskogo. Predisloviye Ye.Bertel'sa. Tash., 1943, M., 1957.
10. Babur-name. I. Per. M.A.Sal'ye. Tash., 1948; Zapiski Babura. Tash., 1958..
11. Zahiriddin Muhammad Bobir. Bobirnoma (Woqiati Bobir). Nashrga tayyorlovchi-lar P.Shamsiyev va S.Mirzayev . 1-2. Toshkent, 1948-1949; 1960.
12. Zahiriddin Muhammed Bobur. Tanlangan asarlar. Nashrga tayyorlovchilar S.Azimjonova va A.Qayumov. Toshkent, 1958.
13. Babur. Izbrannyye sochineniya. Sostaviteli i vstup. stat'ya - S.Azimjanova i A.Kayumov. Tash., 1959.
14. Zahiriddin Muhammad Bobir. Devon. - Asarlar. I. Nashrga tayyorlovchilar S.Azimjonova va A.Qayumov. Toshkent, 1965.
15. Bobirnoma. - Asarlar. 2-3. Nashrga tayyorlovchi P.Shamsiyev.Toshkent, 1965-1966.
16. Traktat ob `aruze. Red. i stat'ya I.V.Steblevoy. M., 1972.

Bacher, Braun, Simonsen, and Guttmann

1. Moses ben Maimon. Sein Leben, seine Werke und sein Einfluss. 1-2. Lpz., 1908-1914.

Badalov, Mikhail Yefremovich

1. Analiz "Serdtseviny schyota" (Lubob al-Hisob) - rukovodstva po matematike Mahmuda ben al-Wusudi. - Voprosy istorii metodiki elementarnoy matematiki. 2. Dushanbe, 1965, 14-33.

Badawi, Abdurrahman

1. Histoire de la philosophie en Islam. P., 1972.

Badi` Diwan (No 1394)

1. Majma` al-arqam ("Predpisaniya fiska"). Priyomy dokumentatsii v Bukhare XVIII v.. Faksimile rukopisi, vvedeniye, per., prim. i prilozheniya A.B.Vil'danovoy. M., 1981.

Baethgen, Friedrich

1. Fragmente syrischer und arabischer Historiker. Lpz., 1884.

Baffioni, Carmela

1. Atomismo e antiatomismo nel pensiero islamico. Napoli, 1982.
2. Euclid in the Rasa'il Ikhwan al-Safa'. - Études orientales. 5-6, 1990, 58-68.

Bağdadlı, İsmail Paşa (d. 1920)

1. Idah al-maknun fi'l-dhayl `ala Kashf al-zunun `an isama al-kutub wa'l-funun. Kaşf-el-zunun zeyli. Izah al-maknun fi al-zayli `ala Kaşf al-zunun `an asami al-kutubi va'l-funun. Tashihleri Şerefettin Yaltkaya ve Rifat Rilge tarafından yapılmıştır. 1-2. Istanbul, 1945-1947.

al-Baghdadi (No 320)

1. Kitab al-farq bain al-firaq. Transl. by K.Chambers Seelay. N.Y., 1920.
2. al-Takmila fi'l-hisab. Nashara A.S.Sa`idan. Kuwayt, 1986.

al-Baghdadi (No 386)

1. L'introduction topographique à l'Histoire de Baghdad d'Abou Bakr Ahmad ibn Thabit al-Khatib al-Baghdadi (393-463 H. = 1002-1071 J.-C.) par Georges Salmon. P. 1904; re-ed. by Fuat Sezgin. F.M., 1993.
2. Ta'rikh al-Baghdad. 1-14. al-Qahira, 1349 h. [1931].
3. Ta'rikh madina Dimashq. Dimashq, 1373 h. [1954].

al-Baghdadi (No 421)

1. Abbaci de numeris et lineis. Ed. B.Boncompagni. Roma, 1863.
2. Ababuchri Liber Mensurationum. Transl. a Girardo Gremonensis. Ed. H.Busard. - J. de Savants. 1968, No 2, 86-124.

al-Baghdadi (No 485)

1. Ilahiyyat. Istanbul, 1932.
2. Kitab al-mu`tabar. 1-3. Haydarabad, 1357 h. [1938].

Bagheri, Muhammad

1. Mathematical Problems of the Famous Iranian Poet Naser-e Khosrow. - HM. 24, 1997, No 2, 193-196.
2. Discovery of a New Letter of al-Kashi. - ACIHS XX, 1997, 56.

Baghirova, Sevinj Hasan qyzy

1. Sochineniye "Tatimma Sivan al-hikma" al-Bayhaki kak obrazets srednevekovogo ensiklopedicheskogo spravochnika. - Tash., 1987.

Bagrow, Leo

1. The Vasco de Gama's Pilot. Genoa, 1951.

Bahadirov, Roiq Majid ughli

1. Ob entsiklopedicheskom trude khorezmskogo uchonogo X v. "Mafatih al-ulum" ("Klyuchi nauk"). - Pis'mennyye pamyatniki Vostoka. Istoriya, filologiya. M., 1979, 13-16.
2. Istoricheskay a terminologiya v trude Abu Abdallaha al-Khorezmi "Mafatih al-ulum". - ONU. 1977, No 9, 39-42.
3. Ming yillik qomus - Fan wa turmush, 1978, No 6, 4-5.
4. "Ilmlar kaliti" wa uning muallifi. - Adadiy meros, 1980, No 3, 47-50.
6. O sochinenii Abu Abdallaha al-Khorezmi "Klyuchi nauk". - ONU. 1982, No 6, 3-47.
7. Klassifikatsiya nauk Abu Abdallaha al-Khorezmi i yeyo mesto v istorii nauchnoy mysli. ADK(fs). Tash., 1983.
8. Raiq Bahadiruf. Hawl muallaf Abi `Abdallah al-Khwarizmi "Mafatih al-ulum". - AJ. 3, 1989, 152-162.

Bahmanyar (No 376)

1. Tahsilat. al-Qahira, 1329 h. [1911].
2. Al-Tahsil (Poznaniye). Per., stat'ya i komm. A.V.Saghadeeva. Baku. 1983.

Baker, M.

1. Alhazen's Problem. Its Bibliography and Extension of It. - Amer. J. of Math., 4, 1881, 327-331.

Bakikhanov, `Abbas Quli Agha Qudsi (1794-1846)

1. Gülistan-Iram. Pod red. V.M.Sysoyeva, per. farsidskikh tekstov A.Gajinskogo. Baku, 1926.
2. Gülüstani-Iram. Müharrir M.Sharifli. Baky, 1951.
3. `Abbas Quli Aqa Bakikhanuf. Gulistan-i Iram, ba ihtimam `Abd al-Karim `Ali-zada. Baku, 1970.

Bakoš, Jan

1. Die Einleitung zur Psychologie des Barhebraeus im achten Fundamente seines Buches der Leuchte des Heiligtums. - Archiv orientalni. 10, 1938, 112-127.

Bakran (No 551)

1. Jahan-name (Kniga o mire). Izd. teksta, vvedeniye i ukazateli Yu.Ye.Borshchevskogo. M., 1960.

Baldi, Bernardino

1. Vite di matematici arabi, con note di M.Steinschneider. - BBSMF. 5, 1872, 427-534.

al-Balkhi (No.156)

1. Masalih al-abdan wa'l-anfus. Sustenance for Body and Soul. F.M., 1984.

Bancel, Faiza

1. Les centres de gravité d'Abū Sahl al-Qūhī.-ASP, II, 2001, No 1-6, 45-78.

Banerjee, Subir A. and Sabra, A.I.

1. 13[th] Century Magnetic Compass Described by Sultan al-Ashraf of Yemen. Busala maghnatiyy min al-qurun al-thalith `ashar wa sufuha al-Sultan al-Ashraf min al-Yaman. - ISHAS 2, 1979, 101, Suppl., 5-6.

Banu Musa (No 74)

1. Kniga izmereniya ploskikh i sharovykh figur. Per. i prim. J.ad-Dabbakha. - IMI. 16, 1965, 389-426.
2. Das Vorwort des Astronomen Bani Musa b. Šakir zu den "Conica" des Apollonios von Perg. Bearbeitet von N.Terzioğlu. Istanbul, 1974.
3. The Banu (Sons of) Musa bin Shakir. The Book of Ingenious Devices. Kitab al-Hiyal. Dordrecht - Boston - L., 1979.
4. Kitab al-hiyal. Tashih Ahmad Yusuf al-Hasan, Muhammad `Ali Khayyat wa Mustafa Ta`amuri. Banu (Sons of) Musa bin Shakir. The Book of Ingenious Devices. Ed. Ahmad Y.al-Hassan with Collaboration of Muhammad 'Ali Khayyat and Mustafa Ta`amuri. Aleppo, 1981; Islamabad, 1989.
5. Preface of Banu Musa. - Apollonius [3], II, 1990, 620-629.
5. The Propositions which are Needed for Simplification of the Understanding of this Treatise. - Apollonius [3], II, 1990, 632-650.

Baqir, Muhammad

0a. Bar-rasi-yi nuskhaha-yi khatti az athar-i Khwaja Nasir al-Din Tusi dar kitabkhana-yi Danishgah-i Panjab Lahur [Pakistan] wa kitabha-yi ki dar anha az Khwaja wa masnifatash shuda ast. - "al-Tusi" [2], 1957, 26-33.
1. Fihrist-i kitabkhana-yi milli-yi Muhammad Baqir. Lahur, 1961.

Bar Shinaya (No 349)

1. Elie de Nisibe. Chronologie. Éd. Lamy. Bruxelles, 1828.
2. Elias von Nisibis. Buch vom Beweis der Wahrheit des Glaubens. Übers. Horst, Lpz., 1886.
3. Elias Metropolitae Nisibenis Opus Chronologicum, - Corpus scriptorum christi-anorum. (3) Scriptores Syri. 7: 1 (versio), 2 (textus). Interp. et vert. E.W.Brooks, Parisiis, 1910.

Barani, Syed Hasan

1. al-Biruni. `Aligarh, 1927.
2. Muslim Researches in Geodezy. - "al-Biruni" [4], 1951, 1-52.
3. Al-Biruni's Scientic Achievements. - Indo-Iranica. 5, 1952-1953, 33-48.
4. Biruni and his Magnum Opus al-Qanunu'l-Mas`udi. Introductory Discource to "Al-Qanunu'l-Mas`udi". - al-Biruni [14], 1956, I-LXXII.
5. Ibn Sina and Al-Biruni, a Study in Similarities and Contrasts. - "Ibn Sina" [6], 1956. 3-14.
6. Kitabut tahdid, an Unpublished Masterpiece of Astronomical Geography of al-Biruni. - Islamic Culture. 31, 1957, 165-177.

Baranov, Kharlampiy Karpovich (1892-1980)

1. Predisloviye. - al-Jahiz [11], 1965, 5-14.

Baratov, Mubinjan Barat ughli

1. Velikiy myslitel' Abu Ali ibn Sina. Tash., 1980.
2. Abu Ali ibn Sino - buyuk mutafakkir. Toshkent, 1980.
3. Abu Ali ibn Sina - velikiy filosof-éntsiklopedist. - "Ibn Sina" [3], 1980, 26-47.
4. Abu Ali ibn Sino - buyuk entsiklopedist olim va faylasuf. - "Ibn Sina" [9], 1980, 5-23.

Barbaro, Daniele (1513-1570)

1. Desyat' knig ob arhitekture Vitruviya s kommentariyami Daniele Barbaro. Per. A.I.Venediktova, V.P.Zubova i F.A.Petrovskogo, vstup. stat'ya i prim. V.P.Zubova. M., 1938.

Barbier de Meynard, Casimir (1826-1908)

1. Dictionnaire géographique, historique et littéraire de la Perse et des contrées adjacentes. Extrait du Mo'djem el-Bouldan de Jacout et complété à l'aide de documents arabes et persans pour la plupart inédits. P., 1861; 1873. 1. Abağ - Sirkan. 2. Šark - Yahudiya; reéd. par Fuat Sezgin. F.M., 1994.

Barkashli, Mahdi [Barkechli, Mehdi]

1. Musiqa-yi Farabi. Tehran, 1354 s.h. [1975].
2. La musique iranienne. - "Histoire de la musique". 1960, 453-525.

Barthold, Wilhelm [Bartol'd Vasiliy Vladimirovich] (1869-1930)

1. O nekotorykh vostochnykh rukopisyakh v bibliotekakh Konstantinopolya i Kaira. - Zap. Vost. otd. Ross. Arkheolog. obshchestva. 18, 1907-1908, 0115-0154; Sochineniya. 8, M., 1973, 220-253.
2. Ulugbek i yego vremya. Petrograd, 1918; Sochineniya, 2:2. M., 1964, 23-196.
3. Baihaqi, Abu 'l-Hasan 'Ali. - EI. 1, 1913, 592.
4. O nekotorykh vostochnykh rukopisyakh. - Izv. Ross. AN (6), 2, 1919, 426-437; Sochineniya. 8, 1973, 340-349.
5. Sobraniye vostochnykh rukopisey v Baku. - Izv. Ross. AN (6), 19, 1925, 951-965; Sochineniya. 8, 1973, 435-439.
6. Turkestan v epokhu mongol'skogo nashestviya. Lg., 1927; Sochineniya. 8, 1973.
7. Turkestan down to the Mongol Invasion. L., 1928; reéd. by Fuat Sezgin. F.M.,1995.
8. Uchonyye musul'manskogo "renessansa". - Zap. Kollegii vostokovedov pri Aziatskom muzeye AN SSSR, 5, 1930, 1-14.
9. Hudud al-`alem. Rukopis' Tumanskogo. S vvedeniyem i ukazatelem V.Bartol'da. Lg., 1930.
10. Beyhaqi, Abu'l-Hasan. - Sochineniya. 8, 1973, 586-587.

Bašagič, Savfet Beg

1. Popis orijentalnich rukopisa moje biblioteke. - Glashik zemalskog muzeja u Bosni i Hercegovini. Sarajevo, 1916, No 3-4, 207-348.

"Bashmakova"

1. Bashmakova, I.G., Belyy, Yuriy Aleksandrovich, Demidov Sergey Sergeyevich, Rosenfeld, B.A., Yushkevich, A.P. Khrestomatiya po istorii matematiki. Arifmetika, algebra, teoriya chisel, geometriya. Posobiye dlya studentov. Pod red. A.P.Yushkevicha. M., 1975.

Bashmakova, Izabella Grigor'yevna (b. 1921), Slavutin, Yevgeniy Iosifovich (b. 1949), and Rosenfeld B.A.

1. Arabskaya versiya "Arifmatiki" Diofanta. - IMI. 23, 1978, 192-225.
2. Arabic Version of Diophantos' Arithmetica. - Science and Technology. Humanism and Progress. 2. M., 1978, 151-161.

Basset, René (1825-1924)

1. Les manuscrits arabes de deux bibliothèques de Fès. Alger, 1887.
2. Notice sommaire des manuscrits orientaux de deux bibliothèques de Lisbonne: 1. Bibliothèque Nationale; 2; Bibliothèque de l'Académie des Sciences. Lisbonne, 1894.

Batsiyeva Svetlana Mikhaylovna (1928-1980)

1. Sotsial'nyye osnovy istoriko-filosofskogo ucheniya Ibn Khalduna. - Pamyati akademika Ignatiya Yulianivicha Krachkovskogo. Lg., 1958, 192-202.
2. Istoriko-filosofskiy traktat Ibn Khalduna "O prirode obshchestbennoy zhizni lyudey". ADK(i). 1959.
3. Istoriko-sotsiologicheskiy traktat Ibn Khalduna "Mukaddima". M., 1965.
4. Ibn Khaldun et son milieu social. - Atti del III gongreeo di studi arabi e islamici (Revello, 1966). Napoli, 1967, 133-144.
5. Ucheniye o "dvoystvennoy istine" Averroesa - Ibn Khalduna. - Palestinskiy sbornik. 19(82), 1969, 149-158.
6. Sfitlana Batsiyifa. Nazariyat Ibn Khaldun. Tunis, 1974.

al-Battani (No 137)

1. Mahometis Albategnii de scientia stellarum liber cum aliquot additionibus. Bononiae, 1645.
2. al-Battani, sive Albatenii Opus Astronomicus (al-Zij al-Sabi'). 1-3. Ed. et trad. C.A.Nallino. Mediolani, 1899-1907; Hildesheim - N.Y., 1977.

3. Los Canones de Albateni. Herausg. mit Einleitung, Anmerkungen und Glossar von Georg Bossong. Tübingen, 1978.

Bauer, H.

1. Die Psychologie Alhazens auf Grund von Alhazens Optik dargestellt. - Beiträge zur Geschichte der Philosophie des Mittelalters. 10, Münster, No 5, 1911.

Bauerreiss, Heinrich

1. Zur Geschichte des spezifischen Gewichtes im Altertum und Mittelalter. Inaugural-dissertation. Erlangen. 1914.

Bäumker, Clemens

1. De ortu scientiarum Alfarabi über den Ursprung der Wissenschaften. - Beiträge zur Geschichte der Philosophie des Mittelalters. 19, Münster, No 3, 1916.

Baumstark, Anton (1872-1948)

1. Geschichte der syrischen Literatur. Bonn, 1922.

Bausani, Alessandro

1. Cosmologia e religione nell'Islam. Cosmology and Religion in the Islam. - Scientia. 108, 1973, 723-767.
2. Some Considerations to Three Problems of the Anti-Aristotelian Controversy between al-Biruni and Ibn Sina. - Akten des VII Kongresses für Arabistik und Islamwissenschaft. Göttingen, 1974, 74-85.
3. Scientific Elements in Isma'ili Thought: the Epistles of the Brethren of Purity (Ikhwan al-Safa'). - "Isma'ili Contributions to Islamic Culture", ed. S.H.Nasr. Teheran, 1977.
4. L'enciclopedia dei Fratelli della purità. Napoli, 1978.
5. Cosmic Dimensions in Muslim Texts. - ISHAS 2, 1979, 46-47.
6. Die Bewegungen der Erde im Kitab Ikhwan al-Safa': ein vor-philolaisch-pythagoräisches System? - ZGAIW. 1, 1984, 88-99.

Bavani, Mehdi

1. Specimens of Fine Writing from the Imperial Library of Iran with Descriptions. Tehran, 1959.

Bayevskiy, Solomon Isaakovich

1. Opisaniye persidskikh i tajikskikh rukopisey Instituta Narodov Azii. 4-5. M., 1962-1968.

Baygozhina [Bayhujjina], Ghaliyabanu [`Aliyya Banu] Oraz qyzy

1. Iz istorii diofantova analiza na srednevekovom arabskom Vostoke. - AKD(fm). M., 1994.
2. O printsipe klassifikatsii zadach u Abu Kamila v yego "Knige o neopredelyonnykh zadachakh". - IMI. 36, 1995, No 1, 60-66.

al-Bayhaqi (No 471)

1. Tatimma Siwan al-hikma, tashih Muhammad Shafi`. Lahur, 1351 h. [1935].
2. Ta' rikh al-hukama al-Islam. Nashara Muhammad Kurdi `Ali. Dimashq, 1946.
3. `Ali al-Bayhaqi's Tatimmat Siwan al-Ḥikma. A Biographical Work on the Learned Men of Islam. Transl. by M.Meyerhof. - Osiris. 8. 1948, 122-218.
4. Ta'rikh Bayhaq. Nashara A.Bahmanyar. Tehran, 1362 s. h. [1983].
5. Tatimma Sivan al-hikma. Per. S.G.Baghirovoy. - Baghirova [1], 1987, 29-100.

Bayrakdar, Mehmet

1. Al-Jahiz and the Rise of Biological Evolutionism. - Islamic Culture. 71, 1983, 149-155.

Beatrice, F.

1.Ulugh Beg - EI^2, X, 2000, 812-814.

Beaujouan, Guy (b. 1925)

1. Étude paléographique sur la "rotation" des chiffres et l'emploi des apices du Xᵉ au XIIᵉ siècle. - Revue d'histoire des sciences. 1, 1948, 301-313.
2. La science hispano-arabe et les modalités de son influence. - ACIHS XIII (M., 1971). Colloquium: La science au moyen age, 1971: 1974, 59.

de Beaurecueil, Serge de Laugier

1. Les manuscrits d'Afghanistan. Le Caire, 1964.

Bebbouchi, Rachid and Taleb, K.

1. Les infiniments grands de Thabit ibn Qurra. - "al-Multaqi" [1], 1986, 25-26.

Bebbouchi, Rachid

1. L'infini et les mathématiciens arabes. - "al-Multaqi" [2], 1995, 20-26.

Beer, P.

1. Leben und Werke des Rabbi Moses ben Maimon, gewöhnlich Rambam und Maimonides genannt. Prag, 1834.

Beeston, A. F. L.

1. Idrisi's Account of the British Isles. - BSOAS. 13, 1949, 265-280.
2. Catalogus of the Persian, Turkish, Hindustanī and Pashtu manuscripts in the Bodleian Library. 3. Additional Persian manuscripts. Ox., 1954.

Bel, Alfred

1. Catalogue des livres arabes de la Bibliothèque de la Mosquée d'el-Qaraouiyine à Fes, Fes, 1918.
2. Ibn Khaldun. - EI. 2, 1927, 395-396.
3. Ibn Haldun. - IA. 5, 1958, 738-744.

Belenitskiy, Aleksandr Markovich (1904-1993)

1. Velikiy sredneaziatsky entsiklopedist X veka al-Biruni o gornykh bogatstvakh Sredney Azii. - Priroda. 1949, No 8, 73-77.
2. O "Mineralogii" al-Biruni. - Vestnik Leningrad. gos. Universiteta. 1949, No 11, 43-54; "al-Biruni" [1], 1950, 88-105.
3. Kartina mira po Biruni. - Uch. zap. LGU, ser. vostokoved. nauk. 2, 1949, 201-214.
4. Glava "O zheleze" mineralogicheskogo traktata Biruni. - Kratkiye soobshcheniya o dokladakh i polevykh issledovaniyakh Instituta istorii material'noy kul'tury AN SSSR. 44, 1961, 59-66.
5. Geologo-mineralogicheskiy traktat Ibn Siny. - IAN Taj. SSR, otd. obshch. nauk. 1953, No 4, 46-54.
6. Ob issledovaniyakh Biruni udel'nykh vesov metallov. - Kratkiye soobshcheniya Instituta narodov Azii AN SSSR, 44, 1961, 59-66.
7. Ocherk zhizni i trudov Biruni. - al-Biruni [22], 1963, 271-291.
8. Mesto mineralogicheskogo traktata Biruni v istorii vostochnoy mineralogii. - al-Biruni [22], 1963, 402-418.
9. Ibn Sina i Beruni (opyt sravnitel'noy kharakteristiki). - "Ibn Sina" [11], 1980, 161-180.

Belen'kiy, Moisey Solomonovich

1. Maymonid. - FE. 3, 1964, 277.

Bellosta, Hélène

1. Ibrahim ibn Sinan on Analysis and Synthesis. - ASP. 1, 1991, No 2, 211-232.

Belov, A. and Vil'sker, Lev Yefimovich

1. Abul'-Faraj i yego "Kniga zanimatel'nykh istoriy". - Abu'l-Faraj [19], 1957, 252-268.

Belyayev, Viktor Ivanovich (1902-1976)

1. Arabskiye rukopisi Bukharskoy kollektsii Aziatskogo muzeya Instituta vostokovedeniya AN SSSR. 2, 1932.
2. Arabskiye rukopisi v sobranii Instituta vostokovedeniya Akademii nauk SSSR. - Uch. zap. Instituta vostokovedeniya AN SSSR. 6, 1953, 54-108.

Belyayev V.I. and Bulgakov P.G.

1. Arabskiye rukopisi sobraniya Leningradskogo gosudarstvennogo universiteta. - Sbornik pamyati akademika Ignatiya Yulianovicha Krachkovskogo. Lg., 1958, 153-157.

Belyayev Yevgeniy Aleksandrovich (1895-1964).

1. Ibn Tufeyl. - FE. 2, 1962, 192.
2. Ibn Khal'dun. - FE. 2, 1962, 192-193.

Ben Cheneb, Mohammed (1869-1948)

1. Étude sur les personnages mentionnés dans l'idjaza du cheikh 'Abd el-Qadir el-Fasy. P., 1907.
2. Catalogue des manuscrits conservés dans les principales bibliothèques Algériennes. Grande Mosquée d'Alger. Alger, 1909.
3. Ibn al-Abbar. - EI. 2, 1927, 374-375.
4. Ibn al-Faradi. - EI. 2, 1927, 399.
5. Ibn Bashkuwal. - EI. 2, 1927, 391.
6. Ibn al-Qadi. - EI. 2, 1927, 415.
7. al-Sanusi. - EI. 4, 1934, 164-165.
8. İbnülfaradi. - IA. 5, 1958, 853-854.

Ben Cheneb, M., Miranda, A. Huici

1. Ibn Bashkuwal. - EI². 3, 1971, 733-734.
2. Ibn al-Faradi. - EI². 3, 1971, 762.

Ben Cheneb, M. and Pellat, Ch.

1. Ibn al-Abbar. - EI². 3, 1971, 673.

Benisch, A.

1. Two Lectures on the Life and Writtings of Maimonides. L., 1847.

Benjamin, Francis S. Jr.

1. The De quantitatibus Stellarum of Thabit ben Kourrah. - Essays in Medieval Life and Tthought Presented in Honour of A.P.Evans. N.Y., 1955, 91-98.

Ben Tamin, M., al-Hošani, M.

1. Classes des savants de l'Ifriqiya. Alger, 1920.

Berenbach, J.

1. Verzeichnis der neuerworbenen arabischen Handschriften der Universitätsbibliothek. Heidelberg - Heidelberger Zeitschr. für Semitistik. 6, 1928, 213-237; 10, 1935, 74-104; ZDMG. 91, 1937, 376-403; "Handschriften" [2], 3. 1987, 577-656.

Berggren, John Lennart

1. A Coincidence of Pappos' Book VIII with al-Biruni's Tahdid. - JHAS. 2, 1978, No 1, 137-142.
2. The Barycentric Theorems of Abu Sahl al-Kuhi. Jun Birghrin. Nazariyat Abi Sahl al-Kuhi `an marakiz al-thikl. - ISHAS 2, 1979, 48, Suppl. 9-10.
3. A Comparison of Four Analemmas for Determining the Azimuth of the Qibla. - JHAS. 4, 1980, No 1, 69-80.
4. Al-Sijzi on the Transversal Figure. - JHAS. 5, 1981, 23-36.
5. An Anonymous Treatise on the Regular Nonagon. - JHAS. 5, 1981, 37-41.
6. On al-Biruni's Method of the Zijes for the Qibla. - ACIHS XVI. Bucharest, 1981, 237-245.
7. Al-Biruni on Plane Maps on the Sphere. Al-Biruni fi'l-musawwarat al-mustawiyya li'l-kura. JHAS. 6, 1982, 47-112.
8. The Correspondence of Abu Sahl al-Kuhi and Abu Ishaq al-Sabi`. A Translation with Commentaries. Burnaby, 1982; JHAS. 7, 1983, 39-124.
9. The Origins of al-Biruni's "Method of the Zijes" in the Theory of Sundials. - Centaurus, 28, 1985, 1-16.

9a. History of Mathematics in the Islamic World. The Present State of the Art. - Bull.: Middle East Studies Association. 19, 1985, No 1, 11-33.

10. Episodes in the Mathematics of Medieval Islam. N.Y. - B. - Hb. - L. - P. - Tokyo, 1986.
11. Spherical Trigonometry in Kushyar ibn Labban's Jami` Zij. - "From Deferent to Equant" [1], 1987, 15-33.
12. Innovation and Tradition in Sharaf al-Din al-Tusi's al-Mu`adalat. - JAOS. 110, 1990, No 2, 304-309.
13. Proof, Pedagogy, and the Practice of Mathematics in Medieval Islam. - Interchange. A Quaterly Review of Education. 21, 1990, No 1, 36-48.

13a. Medieval Islamic Methods for Drawing Azimuth Circles on the Astrolabes. - Centaurus. 34. 1991, 309-344.

14. Habash's Analemma for Representing Azimuth Circles on the Astrolabe. - ZGAIW. 7, 1991/92, 23-30.
15. Abu Sahl al-Kuhi's Treatise on the Construction of Astrolabe with Proof. Text. Translation, and Commentary. - Physis, 31, 1994, No 1, 141-252.
16. Al-Kuhi's "Filling a Lacuna in Book II of Archimedes' in the version of Nasir al-Din al-Tusi. With Original Arabic Text, Translated and Edited by the Author. - Centaurus, 38, 1996, No 2-3, 140-207.

17. Minor Geometrical Works of Al-Kuhi: A Historical and Mathematical Survey. - ACIHS XX, 1997, 57.

Berggren, J. L. And Van Brummelen, Glen

1. Abū Sahl al-Kūhī on "Two Geometrical Questions".-ZGAIW, 13, 1999-2000, 165-187.
2. Abū Sahl al-Kūhī on Rising Times.-Sciamus, 2, 2001, 31-46
3. Abū Sahl al-Kūhī's "On Drawing Lines from a Point at a Known Angle"-Suhayli, 2, 2001, 161-198.

Bergsträsser, Gotthelf (1886-1933)

1. Hunain ibn Ishaq und seine Schule, Leiden, 1913.
2. Zu den magischen Quadraten. - Der Islam. 13, 1923, 227-235; 14, 1925, 76-81.
3. Hunain ibn Ishaq über die syrischen und arabischen Galen-Übersetzungen. Lpz., 1925.

Berkes, Niyazi

1. Ibrahim Müteferriqa. - EI^2. 3, 1971, 996-998.

Berkutov, Valentin Mikhaylovich

1. Za yedin b"lgaro-tatarski matematicheski r"kopis ot 15 vek. - Matematika i fizika. Sofiya, 1970, No 5, 44-45.

Berman, Laurence V.

1. Avempace (Ibn al-Bajja). - EJ2. 1972, 947-948.

Berozashvili, Nunu Georgis assul

1. Evklides "Satsqisebis" arabul targmanebi. - IAN Gruz. SSR, ser. yaz. i lit., 1976, No 2, 166-173.
2. Tbilisskiy spisok arabskogo perevoda "Nachal" Yevklida. - IAN Gruz. SSR, ser. yaz. i lit., 1977, No 2, 165-170.
3. Nasir al-Din al-Tusis Evklideseuri "Satsqisebis" tbilisur nushebshi qartuli komentarebis shesakheb. - Soobshcheniya AN Gruz. SSR. 1978, No 2, 497-500.
4. Der Geist der mathematischen Terminologie bei Nasir al-Din al-Tusi. - Die arabische Sprache und Literatur im Wandel. Halle a/S, 1979, 42-51.
5. "Tahrir Uklidis" Nasir al-Dina al-Tusi i leksiko-grammaticheskiye osobennosti pamyatnika. ADK(fl). Tbilisi, 1980.

Bertel's, Andrey Yevgen'yevich

1. Nasir-i Khosrow i yego vremya. - AKD(fl). M., 1952.
2. Nasir-i Khosrow i ismailizm. M., 1959.
3. Razi. - FE. 4, 1967, 458-459.

Bertel's, Yevgeniy Eduardovich [E.Berthels] (1890-1957)

1. Vstupleniye. - Nasir-i Khusraw [10], 1933, 7-27.
2. Nasir Khusraw. - EI. 3, 1936, 939-940.

2a. Rashid al-Din. - EI. 3, 1936, 1124-1125.

3. Avitsenna i persidskaya literatura. - IAN SSSR, otd. obshch. nauk. 1938, No 1-2, 75-94.
4. Predisloviye. - Babur [9], 1943, 5-8; 1957, 3-6.
5. Istoriya persidsko-tajikskoy literatury. M., 1960.
6. Nasir-i Husrev. - IA. 9, 1960, 96-97.
7. Navoi i Jami. M., 1965.

Berthelot, Marcelin (1827-1903)

1. La Chimie au moyen age. 1-3,. P., 1893; Amsterdam, 1968.

Betolacci, Amos

1. From al-Kindī to al-Fārābī Avicenna's progressive knowledge of Aristotle's Metaphysics according to his autobiography.-ASP, 11, 2001, No 2, 257-295

Bertrand, Joseph Louis (1822-1900)

1. Note sur la théorie de la Lune d'Aboul-Wefa. - CR. 73, 1871, 581-582.
2. Observations sur la Note de M.Chasles, relative à la decouverte de la veriction lunaire. - CR. 73, 1871, 765-766.
3. Réponse à la Note de M.Chasles. - CR. 73, 1871, 889.
4. La théorie de la Lune d'Aboul-Wefa. - J. de Savants. 1871, 457-474; P., 1873.

Bessel-Hagen, E. and Spies, O.

1. Das Buch über die Ausmessung der Kreisringe des Ahmad ibn 'Omar al-Karabibisi. - QS(B). 1, 1931, 502-540.
2. Tabit b. Qurra's Abhandlung über einen halbregelmässigen Vierzehnflächner. - QS(B). 2, 1933, 186-196.

Besthorn, R. O. et Heiberg, J.L.

1. Codex Leidensis 399, 1. Euclides Elementa ex interpretatione al-Hadschdschhadschii cum commentariis al-Nairizii, Arabice et Latine ed. 1-3. Hafniae, 1893-1910.

Beveridge, Annette S.

1. Abu'l-Fadl [Fazl] `Allami. - EI. 1, 1913, 89-90.
2. Ebulfazl Allami. - IA. 4, 1945, 76-77.

Beveridge, H.

1. Humayun. - EI. 2, 1927, 355.

Bhaskara (12th c.)

1. Bija Ganita or The Algebra of the Hindus. Transl. by E.Strachey, notes by S.Davis. L., 1913.

Bielawski, Józef

1. Al-Farabi- drugi nauczyciel. Zycie i dzielo. - al-Farabi [11b], 1967, VII-LI.

Bican (No 843)

1. `Ajaib al-makhluqat. Qazan, 1888.

Bin Ismail, Mat Rofa

1. Algebra in Islamic Mathematics. - ENWC. 1997, 48-51.

Binash, Taqi

1. Jawahir-nama-yi khwaja Nasir-i Tusi. - NKMDT. 2, 1962, 187-188.

Biot, Jean Baptiste

1. Sur un traité arabe relatif à l'astronomie. - J. de Savants, 1843, 513-533, 609-626, 694-703, 719-734.
2. Sur un exposé de la théorie de la lune, rédigé par un auteur arabe du X^e siècle. - J. de Savants, 1845, 149-166.

Bir, Atilla

1. The Book "Kitab al-hiyal" of Banu Musa bin Shakir Interpreted in the Sense of Modern System and Control Engineering. Ed. by E.Ihsanoğlu. Istanbul, 1990.

Biram, Arthur and Horten, Max

1. Studien zur Philosophie des Abu Rašid an-Nisaburi. F.M., 1986.

al-Biruni (No 348)

1. Alberuni. Chronologie orientalischer Völker. Herausg. von Eduard Sachau. Lpz., 1878, 1923.
2. Albiruni. The Chronology of Ancient Nations. Transl. by Eduard Sachau. L., 1879.
3. Alberuni. India. An Account of the Religion, Philosophy, Literature, Geography, Chronology, Astronomy, Customs, Laws, and Astrology of India about A.D. 1030. Ed. in Arabic by Edward Sachau. L., 1887; re-ed. by Fuat Sezgin, F.M., 1993; Lpz., 1925; Delhi, 1964.
4. Alberuni's India. An Account of the Religion, Philosophy, Literature, Geography, Chronology, Astronomy, Customs, Laws and Astrology of India about A.D. 1030. An English Edition with Notes and Indices by Edward Sachau. 1-2. L., 1888; re-ed. by Fuat Sezgin, F.M., 1993; L., 1910; 1914; N.Y., 1971.
5. al-Athar al-baqiyya `an al-qurun al-haliyya. Tarjuma-yi `Ali Quli Mirza I`tidad al-Saltana. Tehran, 1321 h. [1903], 1350 s. h. [1971].
6. Hikaya al-alat al-musamma al-suds al-Fakhri. Tashih L.Shaykhu. - al-Mashriq. 11, 1908, 68-69.
7. The Book of the Instruction in the Elements of the Art of Astrology Written in Ghazna 1029 A. D. Ed. and transl. by R.R.Wright. L., 1934; Ann Arbor, 1980..
8. Risala li'l-Biruni fi Fihrist kutub Muhammad ibn Zakariya al-Razi. I`tana bi-nashriha wa tashihiha B.Kraus. Epitre de Beruni contenant le répertoire des ouvrages de Muhammad b. Zakariya al-Razi. Publ. par P.Kraus. Paris - P., 1936.
9. Kitab al-jamahir fi ma`rifat al-jawahir. Ed. by F.Krenkow. Hyderabad, 1936.

10. Kitab al-tafhim li awail sina`a al-tanjim. Ba kushish-i Jalal al-Din Humai. Tehran, 1319 s. h. [1940].
11. Athar al-baqiyya. Tarjama-yi Akbar Dana Sirusht. Tehran, 1321 s.h. [1942].
11a. al-Athar al-baqiyya `an al-qurun al-haliyya. Tashih Zakhaw. Baghdad, 1362 h. [1943], 1383 h. [1963].
12. Rasail. Haydarabad, 1367 h. [1948].
13. Hikaya tariq ahl al-Hind fi stihrac al-mamarr. Teshih Zaki Velidi Togan. - Islam tetkikleri Enstitüsü Dergisi. 1-4, 1953, 1-25.
14. al-Qanunu'l-Mas`udi (Canon Masudicus). 1-3, Hyderabad, 1954-1956.
15. Abureyhan Biruni. Pamyatniki minyvshikh pokoleny. Per. i prim. M.A.Sal'ye, stat'i S.P.Tolstova i V.P.Shcheglova. - Izbrannyye proizvedeniya. I. Tash. 1957.
16. Kitab fi tahqiq ma li'l-Hind or India. Hyderabad, 1958.
17. On Transits. Transl. by M.Saffouri and A.Ifram, comm. by E.S.Kennedy. Beirut, 1959.
18. Zvyozdnyy katalog al-Biruni s prilozheniyem katalogov Khayyama i al-Tusi. Per. B.A.Rozenfel'da, S.A.Krasnovoy i M.M.Rozhanskoy, prim. B.A.Rozenfel'da. - IAI. 8, 1962, 85-192.
19. Kitab tahdid nihayat al-amakin li tashih masafat al-masakin. Haqqaqahu al-duktur P.Buljakuv. - MMMA. 8, 1962; "Mathematical Geography" [15]. F.M., 1992.
20. Kitab tahdid nihayat al-amakin li tashih masafat al-masakin. Haqqaqahu M.al-Tanji. Ankara, 1962.
21. Abu Reyhan Biruni. Indiya. Per. A.B.Khalidova i Yu.N.Zavadovskogo, komm. V.G.Ermana i A.B. Khalidova. - Izbrannyye proizvedeniya. 2. Tash., 1963.
22. Abu'l-Reyhan al-Biruni. Sobraniye svedeniy dlya poznaniya dragotsennostey (Mine-ralogiya). Per. A.M.Belenitskogo pod red. G.G.Lemmleyna, Kh.K.Baranova i A.A.Dolinoy, stat'ya i prim. A.M.Belenitskogo i G.G.Lemmleyna. M., 1963.
23. Kniga ob opredelenii khord v kruge pri pomoshchi lomanoy linii, vpisannoy v nego. Per. S.A.Krasnovoy i L.A.Karpovoy, prim. B.A.Rozenfel'da i S.A.Krasnovoy. - INTSV. 3, 1963, 93-147.
24. Kniga ob indiyskikh rashikakh. Per. i prim. B.A.Rozenfel'da. - INTSV. 3, 1963, 148-167.
25. al-Athar al-baqiyya `an al-qurun al-haliyya. Tashih Zakhaw. Baghdad, 1383 h. [1963].
26. A Unique and Unknown Book of al-Beruni Ghurrat al-zijat or Karana Tilaka. Ed., transl. and comm. by S.Rizvi. - Islamic Culture. 37, 1963, 112-130, 167-187, 223-254; 38, 1964, 47-74, 195-212; 39, 1965, 1-26, 137-180.
27. Abu Rayhon Beruniy. Hindiston. A.Rasulov, Yu.Hakimjonov, Gh.Jalolov tarjimasi. Tanlangan asarlar. 2. Toshkent 1965.
28. al-Maqala al-thalitha min al-Qanun al-Mas`udi, tahqiq duktur Imam Ibrahim Ah-mad. al-Qahira, 1385 h. [1965].
29. Aboul Rihan al-Bironi. Istekhrag el awtar fil daira. Ed. Ahmed Said El Demerdash, revised by Abdel Hamid Lotfi. Cairo, 1965.
30. Abu Reyhan Biruni. Geodeziya. Per., stat'ya i komm. P.G.Bulgakova. - Izbrannyye proizvedeniya. 3., Tash., 1966.
31. The Determination of the Coordinates of Positions for the Correction of Distances between Cities. Transl. by Jamil Ali. Beirut, 1967; "Mathematical Geography" [16]. F.M., 1992.
32. Abu Rayhon Beruniy. Qadimli halqlardan qolgan yodgorliklar. Tarjimon A.Rasulov. - Tanlangan asarlar. 1. Toshkent, 1968.
33. Abu Rayhan Beruni. Farmakognoziya v meditsyne. Issledovaniye, per., prim. U.I.Karimova. - Izbrannyye proizvedeniya. 4. Tash., 1973.
34. Saydana. Tarjuma-yi farsi qadim al-Abu Bakr ibn `Ali ibn `Uthman Kashani. Ba kushish-i Manuchahr Satuda wa Iraj Afshar. Tehran, 1352 s.h. [1973].
35. Al-Biruni's Book on Pharmacy and Materia medica. Ed. with English transl. by Hakim Mohammed Said, introduction, comm. and evaluation by Sami K.Hamarneh, 1-2, Karachi, 1973.
36. Abu Rayhan Beruni. Kanon Mas`uda (knigi I-V). Vstup. stat'ya, per. i prim. P.G.Bulgakova i B.A.Rozenfel'da pri uchastii M.M.Pozhanskoy i A.Ahmedova. - Izbrannyye proizvedeniya. 5, ch. I. Tash., 1973.
37. Abu Raihon Beruniy. Qonuni Mas'udiy (1-5-maqolalar). Tarjimon A.Rasulov, izohlarni A.Ahmedov va A.Rasulov tuzgan. - Tanlangan asarlar. 5, I-k. Toshkent, 1973.
38. Aburayhoni Beruni. Kitob-ut-tafhim li-awoili sanoat-it-tanjim, bo chaptayorkunandagon: A.Devonaqulov, J.Mamedova, G.Sobirov, muallifoni tavzehot B.A.Rozenfel'd va G.Sobirov. Dushanbe, 1973.
39. Abu Rayhon Beruniyning uz asarlariga uzi tuzgan ruyhati, A.Rasulov tarjimasi. - "al-Biruni" [8], 1973, 230-243.
40. Yulduz turkumlarini proyektsiyalash va joylarni (kharitaga) kuchirish haqida (Kartografiya). A.Rasulov tarjimasi. - "al-Biruni" [8], 1973, 244-259.
41. Mysli o Zemle i Vselennoy. Otryvki iz knigi Biruni, kotoraya pod nazvaniyem "Nauka zvyozd" budet opublikovana v VI t. yego "Izbrannykh proizvedeniy". Per. B.A.Rozenfel'da, A.Abdurahmanova, M.M.Rozhanskoy. - Priroda. 1973, No 8, 10-11.

42. Abu Rayhan Beruni. Kniga vrazumleniya nachatkam nauki o zvyozdah. Vstup. stat'ya, per. i prim. B.A.Rozenfel'da i A.Ahmedova pri uchastii M.M.Rozhanskoy, A.A.Abdurahmanova i N.D.Sergeyevoy. - Izbrannyye proizvedeniya. 6, Tash., 1975.
43. Abu Rayhan Beruni. Kanon Mas'uda (knigi VI-XI). Per. i prim. B.A.Rozenfel'da i A.Ahmedova pri uchastii M.M.Rozhanskoy (per. i prim.), S.A.Krasnovoy i Yu.P.Smirnova (perevod). - Izbrannyye proizvedeniya. 5, ch.2. Tash., 1976.
44. Predisloviye k traktatu o spiske proizvedeniy Abu Bakra Razi. Per. A.D.Sharipova. - "Materialy" [2], 1976, 234-240.
45. Vozrazheniye Beruni na otvety Ibn Siny. Per. A.D.Sharipova. - "Materialy" [2], 1976, 265-271.
46. The Exhaustive Treatise on Shadows. Transl. and Comm. by E.S.Kennedy, 1-2. Aleppo, 1976.
47. Abu Rayhon Beruniy. Qonuni Mas'udiy (6-11-maqolalar), tarjimon A.Rasulov, mahsus muharrir, suz va kursatgichlar muallifi A.Ahmedov, izohlarni A.Ahmedov va B.A.Ro-zenfel'd tuzgan. - Tanlangan asarlar. 5, 2-k. Toshkent, 1976.
48. Ob otnosheniyakh mezhdy metallami i dragotsennymi kamnyami. Per. M.M.Ro-zhanskoy i B.A.Rozenfel'da. - Nauchnoye nasledstvo. 6, M., 1983, 141-160.
49. Abu Rayhan Beruni. Matematicheskiye i astronomicheskiye traktaty. Predisloviye, per. i komm. P.G.Bulgakova i B.A.Rozenfel'da. - Izbrannyye proizvedeniya. 7. Tash., 1987.

"al-Biruni" (memorial collections)

1. Biruni. Sbornik pod red. S.P.Tolstova. M.-Lg., 1950.
2. Biruni - velikiy uchonyy srednevekov'ya. Sbornik pod red. A.A.Semyonova. Tash., 1950.
3. Beruniy Urta Osiyoning buyuk olimi. Toshkent, 1950.
4. Al-Biruni Commemoration Volume. Calcutta, 1951.
5. Beruni i gumanitarnyye nauki. Otv. red. I.M.Muminov. Tash., 1972.
6. Beruniy va ihtimoiy fanlar. Mas'ul muharrir I.M.Muminov. Toshkent, 1973.
7. Beruni. K 1000-letiyu so dnya rozhdeniya. Otv. red. A. K. Arends. Tash., 1973.
8. Beruniy. Tughilgan kunining 1000 yilligiga. Mas'ul muharrirlar U.I.Karimov va A. Irisov. Toshkent, 1973.
9. Millenary of Abu Raihan Muhammed ibn Ahmed al-Biruni (Karachi, 1973). Ed. by Hakim Mohammed Said. Karachi, 1979.
10. al-Rasiyati dar barayi Abu Rayhan Biruni ba munasibat-i hazara-yi waladat-i u. Essays on al-Biruni Compiled for the Occasion of his Millenary. Tehran, 1352 s. h. [1973].
11. Beyruni'ye armağan. - TTKY (7). 68, 1974.
12. Yad-nama-yi kungra-yi Abu'l-Rayhan Biruni. The Commemoration Volume of Biruni International Congress in Tehran. 1-2. Tehran, 1354-1355 s. h. [1975-1976].
13. Proceedings of the Symposium on al-Biruni and Indian Science Held at New Delhi on November 8-9 1971. Ed. F.C.Auluck. - IJHS. 10(2), 1975, 89-276.
14. Biruni Symposium [at] the Iran Center of Columbia University. Ed. by E.Yarshater and D.Bishop. N.Y., 1976.

"al-Biruni and al-Rumi"

1. The Scholar and the Saint. Studies in Commemoration of Abu'l-Rayhan al-Biruni and Jalal al-Din al-Rumi. N.Y., 1975.

al-Biruni (No 348) and Ibn Sina (No 317)

1. Biruniy blan Ibn Sinaning savol javoblari, A.Rasulov va M.Abdurahmonov tarjimasi. Toshkent, 1947, 1973.
2. Desyat' voprosov Biruni otnositel'no "Knigi o nebe" Aristotelya i otvety Ibn Siny. Per. Yu.N.Zavadovskogo. - "Materialy" [1], 1957, 128-154.
3. Vosem' voprosov Biruni otnosi-tel'no "Fiziki" Aristotelya i otvety Ibn Siny. Per. Yu.N.Zavadovskogo. - "Materialy" [1], 1957, 154-162.
4. Perepiska. Per. Yu.N.Zavadovskogo. Tash., 1973; "Materialy" [2], 1976, 240-265.
5. al-As'ilah wa'l ajwibah (Questions and Answers) Including the Further Answers of al-Biruni and al-Ma'sumi's Defence of Ibn Sina. Ed. with English and Persian Introductions by S.H.Nasr and M.Mohaghegh. Tehran, 1352 s. h. [1973].
6. Ibn Sina'nın on sorunun karşılıkları. - "al-Biruni" [11], 1974, 95-112.

al-Bitruji (No 526)

1. Alpetragii Arabi planetarum theorica physicis racionibus probata nuperrime latines litteris mandota a Calo Calonymos hebraeo Neapolitano, Venetiis, 1531.
2. Al-Bitruji. De Motibus Celorum. Critical Edition of the Latin Translation of Michael Scott. Ed. by F.J.Carmody. Berkeley - Los Angeles, 1952.

3. On the Principles of Astronomy. Arabic and Hebrew Versions with Translations, Analysis and Glossary by B.R.Goldstein. 1-2. New Haven-L., 1971.

Björnbo, Axel A.

1. Über zwei mathematischen Handschriften aus dem vierzehnten Jahrhundert. - BM (3). 3, 1902, No 1, 63-75.
2. Studien über Menelaos Sphärik. - AGMW. 14, 1902.
3. Die mathematischen S.Marcohandschriften in Florenz. - BM (3). 4, 1903, 238-245.
4. Gerardo von Cremona Übersetzung von Alchwarizmis Algebra und von Euklids Elementen. - BM (3). 6, 1905, 239-248.
5. Al-Chwarizmi's trigonometriske tavler. - Festskrift til H.G.Zeuthen. Köbenhavn, 1909, 1-26.
6. Thabits Werk über den Transversalensatz (liber de figure sectore). Mit Bemerkungen von H.Suter. Herausg. und ergänzt durch Untersuchungen über die Entwicklung der muslimischen sphärischen Trigonometrie von H.Bürger und K Kohl. - AGNM. 7, 1924.

Björnbo, A.A. and Vogl, S.

1. Al-Kindi, Tideus und Pseudo-Euklid. Drei optische Werke. AGMW. 26(3), 1912, 3-41.

Blachère, Régis (1900-1973)

1. Yaqut al-Rumi.- EI. 4, 1934, 1247-1248.

Blachère, R. and Renaud, H. P. J.

1. Inventaire sommaire des manuscrits arabes acquis par la Bibliothèque Générale du Protectorat Français au Maroc (années 1929-1930). - Hespéris. 12, 106-133.

Blanpied, William

1. The Astronomical Efforts of Raja Sawai Jai Singh of Jaipur. - Science and Culture. 37, 1971, 451-458.
2. Raja Sawai Jai Singh II: an 18^{th} Century Medieval Astronomer. - Amer. J. of Physics. 43, 1975, No 12, 1025-1035.

Blay, M., Troupeau, G.

1. Sur quelques publications récents consacrées à l'histoire de l'optique antique et arabe. - ASP. 5, 1995, No 1, 121-136.

Blochet, Edgar (1870-1937)

1. Catalogues de la collection de manuscrits orientaux arabes, persans et turcs formés par M.Charles Schefer et acquis par l'Etat. P., 1900.
2. Catalogues des manuscrits persans de la Bibliothèque Nationale. 1-4. P., 1905-1934.
3. Une collection de manuscrits musulmans. Catalogue du Musée de la Mission scientifique au Maroc. P., 1909.
4. Notices sur les manuscrits persans et arabes de la collection Marteau. - NEM. 41, 1923.
5. Catalogue des manuscrits arabes de la Bibliothèque Nationale des nouvelles acquisitions (1884-1924). P., 1925.
6. Catalogue des manuscrits turcs de la Bibliothèque Nationale. 1-2. P., 1923-1933.

Blochmann, H.

1. Biography of Shaikh Abul Fazl-i-`Allami. - `Allami [2], I (I-XXXVI), [3], I (XXY-LIX).

de Blois, F. C.

1. Sabi'. - EI^2. 8, 1995, 672-675.

"Blütezeit"

1. Die Blütezeit der Arabischen Wissenschaft. Herausg. von H.Balmer und B.Claus. Zürich, 1990.

Bode, P.

1. Alhazensche Spiegelaufgabe in ihrer historischen Entwicklung nebst einer analytischen Lösung des verallgemeinerten Problems. - Jahresber. des Phys. Vereins. F.M., 1892-1893, 13-107.

de Boer, Tjitze J. (1866-1942)

1. Die Widersprüche der Philosophie nach al-Gazzali und ihr Ausgleich durch Ibn Rošd. Strassburg, 1894.
2. Zu Kindi und seiner Schule. - Archiv für Geschichte der Philosophie. 13, 1900, 153-200.
3. Geschichte der Philosophie im Islam. Stuttgart, 1901.

4. History of Philosophy in Islam. L., 1903.
5. al-Kindi. - EI. 2, 1927, 1019-1020.
6. Ikhwan as-safa. - EI. 2, 1927, 489-490.
7. Ibn Sina. - EI. 2, 1927, 419-420.
8. Kindi. - IA. 6, 1954, 813-815.
9. Di Bur. Ta'rikh al-falsafa fi'l-islam. al-Qahira, 1377 h. [1957].

Bogdanov, Ivan

1. Avitsena. Sofiya, 1974; 1977.

Bogoutdinov, Alautdin Mahmud zoda (1911-1965)

1. Velikiy myslitel' srednevekov'ya. - Literaturnyy Tajikistan. Stalinabad, 1953, 100-127.
2. Epokha Abu Ali Sina i formirovaniye yego nauchnykh vzglyadov. Abu Ali Sina - uchonyy entsiklopedist. Filosofskiye predshestvenniki Ibn Sina. Filosofskiye vzglyady Ibn Sina. Voprosy logiki v trudakh Abu Ali Sina. - Ibn Sina [39], 7-80.
3. Ocherki po istorii tajikskoy filosofii. Dushanbe, 1961.
4. Ibn Sina. - FE. 2, 1962, 191-192.

Bogoutdinov, A.M. and Trakhtenberg, O.

1. Ibn Roshd. - FE. 2, 1962, 190-191.

Boilot, D.J.

1. al-Biruni. - EI^2. 1, 1960, 1236-1238.
2. L'oeuvre d'al-Beruni. Essai bibliographique. - MIMEO. 2, 1955, 161-256, 3, 1956, 391-396.

Bol'shakona, Kira Georgiyevna, Nevskaya, Nina Ivanovna, and Rosenfeld B. A.

1. Sfericheskaya astrolyabiya al-Rudani. - IAI. 16, 1982, 94-136.

Boltayev, Muhammed Nazar zoda

1. Voprosy gnoseologii i logiki v proizvedeniyakh Ibn Siny i yego shkoly. Dushanbe, 1961.
2. Aqidahoi falsafii Abuali ibni Sino. Dushanbe, 1969.
3. Abu Ali ibn Sina - velikiy myslitel', uchonyy, entsiklopedist srednevekovogo Vostoka. Tash., 1980.
4. Ibn Sina - vydayushchiysya filosof srednevekov'ya. M., 1983.

Boncompagni, Baldassare (1828-1898)

1. Trattati d'Aritmetica pubblicati da Baldassare Boncompagni. I. Algoritmi de numero indorum. II. Joanni Hispalensis liber algorismi de pratica arismetrica. Roma, 1857.
2. Intorno all'opera d'Albiruni sull'India. - BBSMF. 2, 1869, 153-206; "Historical Geography of India", 1993, 1-54.

Bonelli, L.

1. Catalogo dei codici arabi, persiani e turchi della Biblioteca Casanatense. - "Cataloghi" [1], VI, 1892, 405-433, 453-455.

Borho, Walter

1. On Thabit ibn Kurrah's Formula for Amicable Numbers. - Math. Comp. 26, 1972, 571-578.

Borisov, Yu. A.

1. Avitsenna kak vrach i filosof. - IAN SSSR, otd. obshch. nauk. 1938, No 2, 51-73.

Borshchevskiy, Yuriy Yefimovich

1. Vvedeniye. - Bakran [1], 1960, 5-22.
2. Persidskiye i tajikskiye rukopisi Biblioteki Leningradskogo otdeleniya Instituta Narodov Azii AN SSSR. - "Vostokovednyye fondy" [1], 1963, 37-41.

Bosworth, Clifford Edmund

1. The Islamic Dynasties. A Chronological and Genealogical Handbook. Edinburgh, 1961.
2. A Pioneer Arabic Encyclopaedia of the Sciences: al-Khwarizmi's Keys of the Sciences. - Isis. 54, 1963, No 1, 97-111.

Bouamrane [Abu `Imran], Cheikh

1. Les sciences et leur développement dans la civilisation de l'Islam. - "al-Multaqi" [1], 1986, 6-7.

Bousquet, G. H.

1. Ihya' ou Vivication des sciences de la foi, analyse et index. P., 1955.

Boutelle, Marion

1. The Almanac of Arzaquiel. - Centaurus. 12, 1967, No 1, 12-19; "Kennedy" [1], 1983, 502-510.

Bouvat, L.

1. Ulugh Beg. - EI. 4, 1934, 994-996.

Bouvat, L. and Köprülü, Orhan Fuat

1. Uluğ Bey. - IA. 13, 1975, 27-29.

Bouyges M.

1. Essai de chronologie des oeuvres d'al-Ghazali. Beyrouth, 1959.

Bouzid, Ahmed

1. al-Farghani. - ENWC. 1997, 331.

Boyle J. A.

1. `Omar Khayyam: Astronomer, Mathematician, and Poet. - Bull. of J.Rylands Library of Manchester. 52, 1969, No 1, 30-35.

Braginskiy, Iosif Samuilovich (1905-1989)

1. Ibn Sina - velikiy myslitel' i poet. - Ibn Sina [48], 1980, 5-26.

Braune, W.

1. Al-Kadir al-Djilani. - EI^2. 4, 1976, 300.

Braunmühl, Anton (1853-1908)

1.. Nassir Eddin Tusi und Regiomontan. - NAALC. 71, 1898, 33-67.
2. Vorlesungen über Geschichte der Trigonomrtrie. 1. Lpz., 1900.

Bredow, Gabriel Gottfried

1. Edrisis Weltkarte. - Allgemeine Geographische Ephemeriden. Weimar. 9, 1802, 197-225; "Studies on al-Idrisi" [1], F.M., 1992, 1-30.

Brelvi, S. A. and Dhabbar, E. B.

1. A Supplementary Catalogue of Arabic, Hindustani, Persian and Turkish Manuscripts and Descriptive Catalogue of the Avesta, Pahlavi, Pazend and Persian manuscripts in the Mulla Firuz Library. Bombay, 1919.

Brentjes, Burchard

1. Zur geistigen Heimat Ibn Sinas. - "Ibn Sina" [12], 1980, 1, 17-37.

Brentjes, Burchard and Brentjes, Sonja

1. Ibn Sina (Avicenna), der fürstliche Meister aus Buchara. Lpz., 1979.
2. Ibn Sina (Avitsenna). Kiyev, 1984.

Brentjes, Sonja

1. Die Erste Risala der Rasa'il Ikhwan as-Safa' über elementare Zahlentheorie - ihr mathematischer Gehalt und ihre Beziehungen zu spätantiken arithmetischen Schriften. - Janus, 71, 1984, No 1-4, 181-274.
2. Sledy grecheskikh arifmeticheskikh trudov po élementarnoy teorii chisel v arabskikh traktatakh IX - nachala X v. - "al-Khorezmi" [4], 1985, 122-126.
3. Die ersten sieben vollkommende Zahlen, drei Arten befreundeten Zahlen in einem Werk zur elementaren Zahlentheorie von Isma`il ibn Fallus. - NTM. 1987, 21-30.
4. Das Kapitel zur Zahlentheorie der "Problemen des Philosophie" von al-Hindi. - ZGAIW. 4, 1987/88, 33-50.
5. Das Kapitel "`ilm al-ariṯmatiqi" aus der persischen Wissenschaftsenzyklopädie von Fahr ad-Din ar-Razi. Herausg., übers. und komm. - Persica, 13, 1988-1989, 77-105.
7. On Some Theorems to Elementary Number Theory by Kamal al-Din al-Farisi da c. 1320). Leipziger Universität. Lpz., 1990.
7a. Historiographie der Mathematik im islamischen Mittelalter. - AIHS. 42, 1982, No 128, 27-63.

8. Dem Ṯabit b. Qurra zugeschriebene Zusatz I, 46[2] zu Euklid I, 46 in MS Leiden 399, 1. - "Amphora" [1], 1992, 91-120.
9. Algebräische Lehre im islamischen Mittelalter: das Beispiel von Ibn Fallus (st. 1239). - Hamburger Math. Abhandlungen. 1992-1993.
10. Textzeugen und Hypothesen zum arabischen Euklid in der Belieferung von Haǧǧaǧ b. Yusuf b. Matar (zwischen 786 und 833). - AHES. 47, 1994, No 1, 53-92.
11. Elements - Reception of Euclid's Elements in the Arabic World. - ENWC. 1997, 277-279.
12. Al-Jawhari. - ENWC. 1997, 470-471.
13. Al-Nayrizi, - ENWC. 1997, 776-777.
14. Two comments on Euclid's Elements. On the relation between the Arabic text attributed to al-Nayrīzī and and the Latin text ascribed to Anaritius.-Centaurus, 43, 2001, No 1, 17-55.

Brentjes, S. and Hogendijk, J. P.

1. Notes of Thabit ibn Qurra and His Rule for Amicable Numbers. - HM. 14, 1987, No 4, 373-378.

Bretanitskiy, Leonid Semyonovich (1914-1979) and Rosenfeld, B.A.

1. Arkhitekturnnaya glava traktata "Klyuch arifmetiki" Giyas-ad-dina Kashi. - Iskusstvo Azerbayjana. 5, Baku, 1956, 87-130.

Breydo, I. S.

1. Velikiy tajikskiy uchonyy Ibn-Sina (K tysyachiletiyu so dnya rozhdeniya). Lg., 1952.

Brice, William, Imber, Colin, and Lorch, Richard

1. The Da'ire-yi Mu`addel of Seydi `Ali Re'is. - Seminar on Early Islamic Sciences. 1. Manchester, 1976.

Brieux, Alain (1922-1985)

1. Les astrolabes. Texts d'authenticité. - Art et curiosité, 1974, No 9, 1-20.

Brieux, Alain and Maddison, Francis

1. Répertoire des facteurs d'astrolabes et de leurs oeuvres. 1ère partie. Islam. P., 1978.

Brinner, W.

1. Ibn Iyas. - EI². 3, 1971, 812-813.

Brockelmann, Carl (1868-1956)

1. Geschichte der arabischen Litteratur. 1-2. Leiden, 1898-1902; 2. Aufl. 1-2. Leiden, 1943-1944 (GAL).
2. Geschichte der arabischen Litteratur. Supplementbände 1-3. Leiden, 1937-1942 (GAL²).
3. Verzeichnis der arabischen, persischen, türkischen und hebräischen Handschriften der Stadtbibliothek in Breslau. Breslau, 1900.
4. Katalog der orientalischen Handschriften der Stadtbibliothek zu Hamburg. 1. Hamburg, 1908, "Handschriften" [2], 2, 1987, 559-660.
5. Abu'l-Fida'. - EI. 1, 1913, 85-86.
6. Barhebraeus - Bar `Ebraya - Ibn al-`Ibn al-`Ibri. - EI. 1, 1913, 657-658.
7. al-Biruni. - EI. 1, 1913, 757.
8. al-Dimashki. - EI. 1, 1913, 1016.
8a. al-Dinawari. - EI. 1, 1913, 977-978.
9. al-Djurdjani. - EI. 1, 1913, 1066.
9a. Ibn Kutaiba. - EI. 2, 1927, 399-400,
10. al-Kalyubi. - EI. 2, 1927, 709; EI². 4, 1978, 515.
11. al-Karabisi. - EI. 2, 1927, 779.
12. Ibn Khallikan. - EI. 2, 1927, 396-397.
13. Ibn Kutaiba. - EI. 2, 1927, 424.
14. al-Kastallani. - EI. 2, 1927, 863-864; EI². 4, 1978, 865-867.
15. al-Suyuti. - EI. 4, 1934, 620-622.
16. al-Ya`kubi. - EI. 4, 1934, 1247.
17. al-Mas`udi. - EI. 3, 1936, 403-404.
17a. al-Katibi. - EI. 5, 1938, 117-118.
18. Dineveri. - IA. 3, 1954, 593-594.
19. Ibn Hallikan. - IA. 5, 1958, 745-746.
20. Ibnül'ibri. - IA. 5, 1958, 861-862.

21. Kerabisi. - IA. 6, 1958, 576-577.
22. Mes'udi. - IA. 7, 1958, 144-145.

Broidé, I. and Lauterbach, J. Z.

1. Moses ben Maimon. - JE. 9, N.Y., 1905, 73-87.

Browne, Edward Granville

1. Catalogue of the Persian Manuscripts in the Library of the University of Cambridge, 1896.
2. A Handlist of the Muhammedan Manuscripts, including all those written in the Arabic Characters, Preserved in the Library of the University of Cambridge. Cambridge, 1900.
3. A Literary History of Persia. 1-2. Cambridge, 1902-1906.
4. Nasir-i-Khusraw, Poet, Traveller, and Propagandist. - JRAS. 1905, 313-352.
5. A Supplementary Handlist of the Muhammedan Manuscripts Including All Those Written in the Arabic Characters Preserved in the Libraries of the University and Colleges of Cambridge, 1922.

Bruin, Fr.

1. The Fakhri Sextant in Rayy. - Al-Biruni Newsletter, Beirut. 19, 1969, No 4, 1-12.
2. Surveying and Surveying Instruments Being Chapters 26, 27, 28, 29 and 30 of the Book on Finding Hidden Water by Abu Bakr Muhammed al-Karaji (1029 A.D.). Beirut, 1970.

Bruins, Evert Maria (1908-1990).

1. Problema Alhazeni et the Tercentenary of Huygens' Solution. - Centaurus. 13. 1969 No 3-4, 269-277.
2. Roots and Solution of Equations in al-Kashi's Miftah-al-Hisab. Iwirt Bruinz. al-Judhur wa hulul al-mu`addilat fi kitab Miftah al-hisab li'l-Kashi. - ISHAS 2, 1979, 49-50, Suppl. 11-12.
3. Numerical Solution of Equations before and after al-Kashi - "Mathemata" [1], 1985, 105-113.
4. Ptolemaic and Islamic Trigonometry. The Problem of the Qibla. - Janus. 1986, 125-148; JHAS. 9, 1991, 43-68.

Brummett, Palmira

1. Ottoman Seapower and Levantine Diplomacy in the Age of Discovery. N.Y., 1993.

Brunner, C. J. and Pingree, D.

1. Astrology and Astronomy in Iran. - EIr. 2, 1987, 858-871.

Brunner, W.

1. Die Augenheilkunde des Rhazes, 1900.

Buang, Amriah

1. Geography in the Islamic World. - ENWC. 1997, 354-356.

Buchner, F.

1. Die Schrift über den Qarastun von Thabit b. Qurra. - SRPMS. 52-53, 1920-1921, 171-188.

Büchner, V. F.

1. Qazwini, Hamd Allah. - EI. 2. 1927, 904-906.

Budge, Ernest A. Wallis

1. Introduction. - Abu'l-Faraj [16], 1932, 1, XV-LXIII.

al-Bukhari (No 687)

1. Thamara-yi shajara-yi nujum. Lucknow, 1903.

al-Bukhari (No 694)

1. Sharh Hikma al-`ayn. Qazan, 1311 h. [1893-1894], 1319 h. [1901]; Pitirburgh, 1904.

al-Bukhari (No 706)

1. Kitab mukhtasar al-wiqaya fi masail al-hidaya li imam al-humam Sadr al-Shari`a `Ubaydallah ibn Mas`ud ibn Taj al-Shari`a. Ghazan, 1260 h. Mükhteserül-Wigkayet ili Sokra-shchonnyy Wikgayet. Izdan Mirzoyu Aleksandrom Kazem-Bekom. Qazan, 1845.

2. al-Nuqaya. Kalkata, 1274 h. [1859]; Lukhnow, 1289 h. [1873]; 1300 h. [1884]; Dihli, 1301 h. [1885]; Lahur, undated.

Bulatov, Midhat Saghadatdinovich

1. Farabi i arkhitektura. - ONU. 1973, No 6, 56-60.
2. Geometricheskaya garmonizatsiya v arkhitekture Sredney Azii IX-XV vv. ADD(a). Tash., 1974; M., 1978.
3. Arkhitektura v klassifikatsii nauk al-Farabi. - "al-Farabi" [1], 1975, 75-82.

Bulgakov, Pavel Georgiyevich (1927-1994)

1. Fakhriyev sekstant v "Geodezii" Biruni. - ONU. 1963, No 6, 50-55.
2. Biruni i yego "Geodeziya". - al-Biruni [30], 1966, 7-78.
3. Globus Biruni. - ONU. 1965, No 1, 39-40.
4. K biografii Biruni. - Narody Azii i Afriki. 1966, No 4, 195-200.
5. Shkola Ulugbeka i Biruni. - "Iz istorii" [2], 1972, 57-60
6. Zhizn' i trudy Beruni. Tash., 1972.
7. Geodeziya Biruni kak istoriko-astronomicheskiy pamyatnik. - IAI. II, 1972, 181-190
8. Ranniy traktat Biruni o sekstante Fakhri. - IAI. II, 1972, 211-219.
9. Gumanitarnoye naslediye Beruni. - "al-Biruni" [5], 1972, 35-46.
10. O dvykh fragmentakh iz "Kanona Mas'uda" Beruni. - "al-Biruni" [7], 1973, 60-71.
11. Abu Reyhan Beruni. Tash., 1973.
12. Yestestvenno-nauchnoye naslediye Beruni. - ONU. 1973, No 7-8, 27-34.
13. Beruniyning ijtimoiy fanlar sohasidaga ilmiy merosi. - "al-Biruni" [6], 1973, 36-48.
14. Zhiznennyy put' i trudy Biruni. - VIYT. 1974, No 47-48, 68-75
15. Neizvestnyy entsiklopedicheskiy trud XII veka. - ONU. 1976, No 11, 57-61.
16. Beruni i Khorezmi. - "Mathematika Vostoka" [1], 1977, 119-122.
17. Kommentarii Kazi-Zade Rumi na "Kompendiy astronomii" Chagmini. - "Iz istorii" [3], 1979, 163-175.
18. Vklad Ibn Siny v prakticheskuyu astronomiyu. - "Ibn Sina" [8], 1980, 149-157.
19. Abu Ali ibn Sinoning amaliy astronomiyaga qushgan hissasi. - "Ibn Sina" [9], 1980, 113-121.
20. Znacheniye svedeniy Beruni dlya izucheniya deyatel'nosti Ibn Siny. - ONU. 1980, No 8-9, 72-77.
21. K istorii sredneaziatskoy srednevekovoy astronomii. - ONU. 1980, No 10, 54-56.
22. Entsiklopedizm Ibn Siny. - "Ibn Sina" [12], 1981, 39-43.
23. Astronomy iz nauchnogo okruzheniya al-Khorezmi. - "al-Khorezmi" [1], 1983, 9-16.
24. Nauchnoye okruzheniye al-Khorezmi v Bagdade. - "al-Khorezmi" [4], 1985, 63-65.
25. Muallaf mawsu`i majhul min al-qarn al-thani `ashar. - AJ. 3, 1989, 37-47.
26. Formulyary nekotorykh dokumentov po chastnomu pravu iz entsiklopedii an-Nasafi. - "Materialy" [3], 1991, 67-79.

Bulgakov, P.G. and Ahmedov, A.A.

1. Beruni i al-Kindi o teorii parallel'nykh. - ONU. 1977, No 8, 30-36.
2. Muhammad al-Khorezmi - astronom i geograf. - Narody Azii i Afriki. 1983, No 8.
3. Al-salat bayna Asiya al-wusta wa'l-Hind fi maydan al-`ulum al-daqiqa. - AJ. 3, 1989, , 162-178.

Bulgakov, P.G. and Rosenfeld, B.A.

1. Beruni i yego "Kanon Mas'uda". - al-Biruni [36], 1973, 7-49.
2. "Kniga istorii" al-Khorezmi. - ONU. 1983, No 7, 18-22.

Bulgakov, P.G., Rosenfeld, B.A., and Ahmedov, A.A.

1. Muhammad al-Khorezmi. Ok. 783 - ok. 850. M., 1983.

Bulgakov, P.G. and Vahabova, B.A.

1. Srednevekovyye uchonyye iz Merva. - Trudy Yuzhno-Turkmenistanskoy Arkheologi-cheskoy kompleksnoy ekspeditsii. 16, Ash., 1978, 44-52.

al-Buni (No 554)

1. Al-Durr al-manzum fi `ilm al-aufaq wa-n-nujum. al-Qahira, undated.
2. Shams al-ma`arif wa lataif al-`awarif. al-Qahira, 1291 h. [1874]; 1-4, 1310 h. [1892].
3. Shams al-ma`arif wa lataif al-`awarif. Bombay, 1296 h. [1879], 1298 h. [1881].

Buniatov, Ziya Musa oghlu (1925-1997)

1. Vydayushchiyesya lichnosti Azerbayjana v sochinenii Ibn al-Fuwati "Talkhis majma` al-adab fi mu'jam al-alkab". - IAN Azerb. SSR, ser. ist., filos. i prava. 1970, No 3-4, 157-191.
2. Svedeniya o nekotorykh sotrudnikakh Maraginskoy observatorii v sochinenii Ibn al-Fuwati. - Tsirkulyar Shemakhinskoy astrofizicheskoy observatorii. No 7(13), 1971, 6-11.
3. Svedeniya o kometakh, zvyozdakh, meteorakh i zatmeniyakh v nekotorykh sredne-vekovykh arabskikh istochnikakh. - IAN Azerb. SSR, ser. fiz.-tekh. i matem. nauk. 1977, No 4, 106-113.
4. Svedeniya o zemletryaseniyakh v nekotorykh srednevekovykh arabskikh istochnikakh. - IAN Azerb. SSR, ser. nauk o zemle. 1977, No 5, 93-99.

Buonazia, Lupo

1. Catalogo dei codici arabi della Biblioteca Nationale di Napoli. - "Cataloghi" [1], II, 1880, 201-241.
2. Catalogo dei codici arabi della Biblioteca Nationale di Firenze. - "Cataloghi" [1]. III, 1886, 257-297.

Burabayev, M. S., Kharenko, E. D., and Ivanov, A. S.

1. O logicheskom uchenii al'-Farabi. Alma-ata, 1982.

Burckhard J. J.

1. Die astronomischen Tafeln von Al-Khwarismi. - Verhandl. der Schweizerischen Naturforsch. Gesellschaft, 1956, , 73-75.
2. Die mittlere Bewegungen der Planeten im Tafelwerk des Khwarizmi. - Vierteljahrschrift der Naturforsch. Gesellschaft in Zürich. 106, 1963, No 2, 213-231.

Bürger, H. and Kohl, K.

1. Zur Geschichte des Transversalensatzes, des Ersatztheorems, der Regel der vier Grösse und Tangentensatzes. - Björnbo [7], 40-91.

Buriyev, O.

1. O granitsakh semi klimatov v "Zije Guragani" Ulugbeka i na karte mira Hafizi Abru. - "Iz istorii" [3], 1979, 192-198.
2. Svedeniya po Sredney Azii v "Geografii" al-Khorezmi - ONU. 1983, No 7, 72-77.

Burnett, Charles S. F.

1. Al-Kindi, "the Most Practical and True Astrologer": Ya'qub ibn Ishaq al-Kindi's Kitab fi madkhal ila `ilm al-nujum. - ISHAS 2, 1979, 51-52.
2. Al-Kindi on Judicial Astrology: "The Forty Chapters". - ASP. 3. 1993, 55-76.

Burnett, Ch., Yano, M, Yamamoto, K.

1. Abu Ma`šar. The Abbreviation of the Introduction to Astrology, together with Medieval Latin Translation of Adelard of Bath. Leiden, 1994.

Bursalı, Muhammad Tahir [Bursalı Mehmed Tahir]

1. Türklerin Ulum ve Fünuna Hizmetleri. Istanbul, 1327 h. [1909].
2. Osmanlı Müellifleri. 1-3. Istanbul, 1333-1342 h. [1915-1923].)
3. Osmanlı Müellifleri. 1-2, hazırlayanlar A.Fikri Yavuz, İsmail Özen. Istanbul, 1972.

Busard, Hubertus L. L. (b. 1923)

1. L'Algèbre au Moyen Age: Le "Liber mensurationum" d'Abu Bekr. - J. de Savants. 1968, No 2, 65-85.
2. Einiges über die Handschrift Leiden 399,1 und die arabisch-lateinische Übersetzung von Gerhard von Cremona. - History of Mathematics. 1996, 171-205.

Busard, H. L. L. and Koningsveld, P. S. van

1. Der "Liber de arcubus similaribus" des Ahmed ibn Jusuf. - Ann. of Sciences. 30, 1973, 381-406.

Butterworth, Charles

1. Ibn Khaldun. - ENWC. 1997, 422-423.

Buzurg-zoda L.

1. Iskatel' pravdy i spravedlivosti Nosir Khisrou. - Nasir-i Khusraw [16], 1954, 5-14.

Calvo, Labarta Emilia

1. On the Construction of Ibn Baso's Universal Astrolabe. ACIHS XVIII. 1989, P2, 3.
2. La lamina universal de `Ali b. Jalaf (s. XI) en la versión Alfonsi y su evolución en instrumentos posteriores. - "Textos y Estudios" [1]¬,È 1990. 221-238.
3. Abu `Ali al-Husayn ibn Baso (m. 716/1316) Risalat al-safiha al-yami`a li-yami` al-`urud (Tratado sobre la laÈmina universal para todas las latitudas). Madrid, 1993.

3a. On the Construction of Ibn Baso's Universal Astrolabe (14th c.) according to a Moroccan Astronomer of the 18th Century. ZGAIW. 10, 1994, No 1-2, 53-67, 146-147.

4. Ibn Baso's Astrolabe in the Maghrib and East. - "From Baghdad to Barcelona" [1]. II, 1996, 755-767.
5. Abu'l-Fida. ENWC. 1997, 7-8.

5a. Ibn al-Banna. - ENWC. 1997, 404.

6. Ibn al-Zarqallu. - ENWC. 1997, 415-416.
7. Ibn Hawqal. - ENWC. 1997, 419.
8. Al-Majriti. - ENWC. 1997, 547.
9. Yahya ibn `Abi Mansur. - - ENWC. 1997, 1043.
10. Ibn al-Kammud's Astronomical Work in Ibn al-Ha'im's al-Kamil fi'l-Ta'atim. - ACIHS XX, 1997, 28.

Cantor, Moritz (1829-1920)

1. Ahmed ben Jusuf und sein Buch über die Proportionen. - BM (2). 2, 1888, 7-9.
2. Über "liber de similibus arcubus" des Ahmed ben Jusuf. - BM (2). 3, 1889, 15-16.
3. Vorlesungen über Geschichte der Mathematik. 1. Lpz., 1893, 1907, 1912; Lpz.,-B., 1922.

Carandell, Juan

1. On Analemma for the Determination of the Azimuth of the Qibla in the Risala fi `ilm al-zilal of Ibn al-Raqqam. - ZGAIW. 1, 1984, 61-72.
2. Trazado de las curvas de oración en los qudrantes horizontales en la Risala fi `ilm al-zilal de Ibn al-Raqqam. - Dynamis. 4, 1984, 23-32.
3. Risala fi `ilm al-zilal de Muhammad ibn al-Raqqam al-Andalusi. Barcelona, 1988.

Carandell, J., Puig, R., Samsó, J., Vernet, J., and Villadrich, M.

1. Instrumentos astronómicos en la España medieval. Su influencia en Europa. - Convento de San Francisco, Santa Cruz de la Palma (junio - julio 1985). Madrid, 1985.

Carmody, Francis James

1. Regiomontanus' Notes on al-Bitruji's Astronomy. - Isis. 42, 1951, 121-130.
2. Introduction to al-Bitruji's De Motibus Celorum. - al-Bitruji [2], 1952, 11-70.
3. The Planetary Theory of Ibn Rushd. - Osiris. 10,1952, 556-586.
4. Arabic Astronomical and Astrological Sciences in Latin Translations. A Critical Bibliography. Berkeley - Los Angeles, 1956.
5. The Astronomical Works of Thābit b. Qurra. Berkeley - Los Angeles, 1960.
6. Innovations in Averroes' De Coelo. Berkeley, 1982.

Carra de Vaux, Bernard (1867-1952)

1. Notice sur deux manuscrits Arabes. I. Remaniement des Sphériques de Théodose par Jahia ibn Muhammed ibn Schukr Almaghrabi Alandaluci. - JA (8). 17, 1891, 287-295.
2. L'Almageste d'Abu'l Wefa Albuzdjani. - JA (8). 19, 1892, 408-471.
3. Les sphères célestes selon Nasir-Eddin Attusi. - P.Tannery. Recherches sur l'histoire de l'astronomie ancienne. P., 1893, 337-361.
4. Note sur les mécaniques de Bédi ez-Zaman el-Djazari. - NEM. 32, 1893.
5. L'astrolabe linéaire ou baton d'Et-Tousi. - JA (9). 5, 1895, 464-516; "Mathematical Geography" [5], 1992, 184-236.
6. Une proposition du Livre de Fils de Mousa sur les calculs approchés. - BM (2). 12, 1898, 1-2.
7. Une solution du problème de deux moyennes proportionnelles entre deux droites données. - BM (2). 12, 1898, 3-4.
8. Sur l'histoire de l'arithmétique arabe. - BM (2). 13, 1899, 33-36.
9. Avicenne. P., 1900; Amsterdam, 1976.
10. Note sur les mécaniques de Bédi ez-Zaman el-Djazari et sur un appareil hydraulique attribué à Appolonius. - Ann. internationales d'Histoire. Congrès de Paris 1900, section V. P., 1901, 112-120.
11. Gazali. P., 1902.
12. La phhilosophie illuminative (Hikmet el-Ichraq) d'après Suhrawerdi Meqtoul. - JA (9). 19, 1902, 63-94.

13. Abu'l-Hudhayl al-`Allaf. - EI. 1, 1913, 92-93.
14. al-Buni. - EI. 1, 1913, 827.
15. Djabir ibn Haiyan. - EI. 1, 1913, 987-988.
16. Les penseurs de l'Islam. P., 1-5, 1921; 1923 (PI).
16a. Falsafa. - EI. 2, 1927, 48-52.
17. al-Farabi. - EI. 2, 1927, 53-55.
18. Ibn Rushd. - EI. 2, 1927, 410-415.
19. Ibn Tufail. - EI. 2, 1927, 418-420; EI^2. 3, 1971, 957.
20. Astronomy and Mathematics. - Legacy of Islam. 1931, 376-397.
21. al-Shahrastani. - EI. 4, 1934, 283-284.
22. La solution arabe du problème des carrés magiques. - ACIHS IV (Praha, 1937). 1973, 132-140.

"Cartography"

1. Cartography in the Traditional Islamic and South Asian Societies. History of Cartography. 2:1. Ed. J.S.Harley, and D.Woodward. L., 1992.

Casiri, Michael (1710-1791)

1. Bibliotheca Arabico-Hispana Escurialensis. 1-2. Matriti, 1760-1770.

Cassina, Ugo (1897-1964)

1. Sulle equazioni cubiche di Al-Biruni. - Periodico di matem., (4) 21 , 1941, No 1.
2. La trisezione dell'angolo in Al-Biruni. - Periodico di matem., (4) 21, 1941, No 2.

Castells-Criballes, Margarita

1. A 14th Century Egyptian Muwaqqit Interested in Andalusian astronomy. - ACIHS XVIII. 1989, P2, 16.
2. Una tabla de posiciones medias planetarias en el Ziy de Ibn Waqar (Toledo, ca 1357). - "From Baghdad to Barcelona" [1]. I, 1996, 445-452.

Castells, M. and Samsó, J.

1. Seven Chapters of Ibn Saffar's Lost Zij. - AIHS. 45, 1995, No 135, 229-262.

Castillon, Jean François (1709-1791)

1. Seconde Mémoire sur les parallèles d'Euclide. - Mémoires de l'Acad. R. des sciences et belles-lettres, classe de math. B., 1788-1789, 171-203.

Casulleras, Josep

1. El ultimo capitulo del Kitab al-asrar fi nataiy al-afkar. - "From Baghdad to Barcelona" [1]. II, 1996, 613-653.

Catala, M. A.

1. El nacimento del Algebra. - "Historia" [1], 1981. 39-42.
2. El desarollo del Algebra y la Trigonometria durante los siglos XIII al XV. - "Historia" [1], 1981, 68-80.

"Cataloghi"

1. Cataloghi dei codici orientali di alcune biblioteche d'Italia. 1-7, Firenze, 1878-1904.

"Catalogue"

1. Catalogue de la Bibliothèque de la Zaytuna. Tunis, 1908-1911.
2. Catalogue du fonds Ahmad Zaki. Bibliothèque Nationale Egyptienne. Le Caire, undated.
3. Catalogue de la Collection Tal`at Pasha. Bibliothèque Nationale Egyptienne. Le Caire, undated.

Caussin de Parceval, J. J. (1795-1871)

1. Les constellations d'Aboulhossein Abderrahman. - NEM. 12, 1831, 236-276.

Cavid Baysun, M.

1. Evliya Çelebi. - IA. 4, 1956, 400-412.

Chabas, José

1. Zacut, Abraham. - ENWC. 1997, 1050.

Chabas, José and Goldstein, B.R.

1. Andalusian Astronomy: al-Zij al-Muqtabis of Ibn al-Kammad. - AHES. 48, 1994, 1-41.

Chabrier, Jean-Claude

1. Musical Science. - EHAS. II, 1996, 581-613.

Chaghatai, Mohammed `Abdallah

1. A Family of Great Mughal Architects. - Islamic Culture. 11. 1937, No 2, 200-209.

Chaix, Paul

1. Étude sur Aboulféda. - Nouvelles Ann. des voyages. I. 1862, 5-46.

Chalhoub, Sami

1. Zu Sibt al-Maridinis Handschrift Tuhfat al-ahbab fi `ilm al-hisab. Dissertation. Lpz, 1981.
2. Algebraische Methoden für die Lösungen von geometrischen Aufgaben bei Abu Kamil Suga obn Aslam al-Hasib. - ACIHS XX, 1997, 33.

Chalhoub, S. and Rosenfeld, B.

1. Trigonometry in Islamic Mathematics. - ENWC. 1997, 980-981.

Chalisova, Natal'ya Yur'yevna

1. Traktat "Hadaik al-sihr wa dakaik al-shi`r" Rashid al-Dina Watwata. ADK (fl). M., 1980.

Chandpuri, `Ali Kausar

1. Danish-nama-i jehan (A manuscript of 9th Cent. A.H./15th Cent. A.D.). - SHM. 4, 1980, No 1, 53-56.

Chandrasekharan

1. A Descriptive Catalogue of the Islamic Manuscripts in the Government Oriental Manuscripts Library. 2-3. Madras, 1950-1954.

Charette, François and Schimdt, Petra

1. A Universal Plate for Timekeeping by the Stars by Ḥabash al-Hāsib.-Suhayl, 2, 2001, 107-159.

Chasles, Michel (1793-1880)

1. Rapport sur un mémoire de M.F.Woepcke intitulé: Essai d'une restitution des travaux perdus d'Apollonius sur les quantités irrationelles, d'après indications tirées d'un manuscrit arabe. - CR. 37, 1853, 553-568.
2. Observations relatives à une Communication de M.Bertrand sur la théorie de la Lune d'Aboul-Wefa. - CR. 73, 1871, 588-589.
3. Sur la découverte de la variation lunaire. - CR. 73, 1871, 637-647.
4. Réponse à un passage de Note de M.Bertrand insérée dans les Comptes rendus de la dernière séance. - CR. 73, 1871, 805-808.
5. Sur la découverte de la variation par Aboul-Wefa. - CR. 76, 1873, 859-864.
6. Explication du texte d'Aboul-Wefa sur la troisième inégalité de la Lune. - CR. 76, 1873, 901-911.

Chatterjee, Bina

1. Al-Biruni and Brahmagupta. - "al-Biruni" [13], 1975, 161-165.

Chaudhri, A. C.

1. Ibn al-Haitham: the Educational and Scientific Importance of His Writings. - "Ibn al-Haytham" [1], 1970, 109-123.

Charyyev, Gel'dy Oraz oghly

1. Avitsenna - uchonyy i myslitel'. M., 1980.
2. Avitsenna - Aristitel' Vostoka. - IAN Turkm. SSR, ser. obshch. nauk. 1980, No 3, 3-9.
3. Avitsenna i yego filosofiya. Ashkhabad, 1980.

Chawushi, Ja`far Aqayani

1. Ulughbik wa rasadkhana-yi Samarqand. - Yakan, 1351 s.h. [1972], No 3(88), 127-130.
2. Hakim `Umar Khayyam Nishapuri wa ibtikarat-i `ilmi-yi u. - Yakan. 1352 s. h. [1973], No 6(91), 306-308; No 7(92), 366-373; No 8(93), 421-424.

3. Abu Rayhan Biruni wa ibtikarat-i `ilmi-yi u. - "al-Biruni" [10], 1973, 346-398.
4. Abu'l-Wafa Buzjani. - Yakan, 1354 s. h. [1975], No 7(108), 297-301; No 8(109), 342-346.
5. Ḥakim Ibn-i Haytham wa inkishafat-i `ilmi-yi u. - Amuzish wa parwarish. 1354 s.h. [1975], 8, 434-447, 497-504.
6. Ḥakīm 'Umar Khayyām and the arithmetic triangle. – Farhang, 12, 2000, No 29-32, 17-31

Chéhadé, Abdul Karim

1. `Abd al-Latif al-Baghdadi, an Arab encyclopedist, and medieval scientist. - ISHAS I. 1, 1977, 693-734; II. 1978, 873-874.

Cheikho, Louis (1889-1927)

1. Catalogue raisonné des manusrits arabes de la Bibliothèque de l'Université de St.Joseph. - Mélanges de la Faculté Orientale de Beyrouth. 7, 1914-1921, 267-290.

Chejne, A. G.

1. Ibn Hazm. Chicago, 1982.

Chelebi, `Ashik (No 1039)

1. Meşair üş-şuara or Tezkere. Ed. G.M.Meredith-Owens. L., 1971.

al-Chelebi al-Mawsili, D.

1. Kitab makhtutat al-Mawsil. Baghdad, 1923.

Chelhot, Victor

1. "Al-Qistas al-mustaqim" et la connaissance rationelle chez Ğazali. - Bull. d'Études Orientales, 15, Damas, 1958, 7-98.

Chemli, Mongi

1. La philosophie morale d'Ibn Bajja, Avempace, à travers le "Tadbir el-mutawahhid: le régime du solitaire". Tunis, 1969.

al-Chirkasi (No 937)

1. Mohhammed ben Ahmed ben Ayas, de Circassie. Našq al-azhar fi `ağa'ib al-aqtar [L'Odeur des fleurs dans les Merveilles de l'Universe] - Cosmographie. Éd. par Louis Langlès. - NEM. 8, 1810, 1-131; "Geography of Egypt" [4]. F.M., 1992, 1-131.
2. Muhammad ibn Ahmad ibn Iyas. Kitab ta`rikh Misr al-mashhur bi-badai` al-zuhur fi waqai` al-duhur. al-Qahira, 1311 h. [1893-1894].

Chottin, Alexis

1. La musique arabe. - "Histoire de la musique", 1960, 526-544.

Christ, P. S.

1. The Psychology of the Active Intellect of Averroes. Philadelphia, 1926.

Christensen, Arthur

1. Un traité de Métaphysique de `Omar Hayyam. - Le Monde Oriental, 1, 1906, No 1, 1-16.
2. Critical Studies in the Ruba'iyat of `Umar-i-Khayyam. Kobenhavn, 1927.

Chwolsohn, Daniil Avraamovich (1819-1910).

1. Die Ssabier und Ssabismus, 1-2, SPb., 1856; Amsterdam, 1956.

Cimino, M.

1. L'astronomia araba e la sua diffusione. - Accad. dei Lincei. Fondazione Alessandro Volta. Atti dei convegni. 13. Roma, 1971, 647-674.
2. Az-Zarqali e il moto proprio dell' apogeo solare. - Physis. 26, 1984, No 2, 157-188.

Clagett, Marshall (b. 1916)

1. A Medieval Latin Translation of a Short Arabic Tract on the Hyperbola. - Osiris. 11, 1954, 359-385.
2. The Science of Mechanics in the Middle Ages. Madison, 1959.

3. Archimedes in the Middle Ages. 1. The Arabo-Latin Tradition. Madison, 1961. 4, Philadelphia, 1980, 5. Philadelphia, 1984.

Clément-Mullet, Jean Jacques (1796-1869)

1. Recherches sur l'histoire naturelle et la physique. Pesanteur spécifique de diverses substances minérales procédé pour l'obtenir d'après Abou'l Rihan Albirouny. Extrait de l'Ayin Akbery. - JA (5). 11, 1858, 379-406.
2. Essai sur la minéralogie arabe: une étude historique et philologique, particulièrement sur les gemmes ou pierres précieuses basée sur l'histoire naturelle et la physique chez les Arabes. - JA (6). 11, 1868, 5-81, 109-253, 502-522; "Mathematical Geography" [5], 1992, 156-164; Amsterdam, undated.

Codrington, O.

1. Catalogue of the Arabic, Persian, Hindustani and Turkish Mss in the Library of Royal Asiatic Society. - JRAS. 1892, 501-569.

Cohen, A.

1. The Teaching of Maimonides. L., 1927.

Colin, Georges-Seraphin

1. Hisab al-djumal. - EI². 3, 1971, 468.

Colin, G.-S. and Renaud, H. P.

1. Note sur le "muwakkit" marocain Abu Muqri' - ou mieux Abu Miqra' - al-Battiwi (XIIIe s. J. C.). - Hespéris. 25, 1938, 94-96.

Comes, Mercè Maymo

1. "The Meridian of Water" in the Tables of Geographical Coordinates of al-Andalus and North Africa. - ACIHS XVIII. 19, 1989, P2, 1.
2. Los Ecuatorios Andalusies: Ibn al-Samh, al-Zaqalluh y Abu'l-Salt. Barcelona, 1991.
3. The Accession and Recession Theory in al-Andalus and North of Africa. - "From Baghdad to Barcelona" [1]. I, 1996, 349-364.
4. Ibn al-Hā'im's Trepidation Model.- Suhayl, 2, 2001, 291-408.

Corbin, Henri

1. Étude préliminaire. - Nasir-i Khusraw [15], 1953, 1-144.
2. Histoire de la philosophie islamique. P., 1964; 1986.
3. Philosophie iranienne et philosophie comparée. P., 1985.

Cortabarria Beitia, A.

1. La classification des sciences chez al-Kindi. - MIDEO. 11, 1972, 49-76.

2. Deux sources de S.Albert le Grand, al-Bitruji et al-Battani. - MIDEO. 15, 1982, 31-52.

Cour, Auguste

1. Catalogue des manuscrits conservés dans les principales bibliothèques Algeriennes. Medresa de Tlemcen. Alger, 1907.

Courtois, V.

1. Al-Biruni, a Life Sketch. Calcutta, 1952.
2. Sheikh abu Raihan al-Biruni. - Islamic Literature. 1952, No 4, 35-40.

Crawford, Lord and Kerney, M.

1. Bibliotheca Lindesiana. Handlist of Oriental Manuscripts, Arabic, Persian, Turkish. Aberdeen, 1898.

Crispo-Moncada, C.

1. Codici Arabi, Nuovo fondo della Biblioteca Vaticana. Roma, 1900.

Crombie, Alistair C. (1915-1996)

1. Avicenna's Influence on the Medieval Scientific Tradition. - "Ibn Sina" [3], 1952, 84-107.

Crosby, Henry Lamar

1. Thomas of Branwardine. His Tractatus de proportionibus. Its Significance for the Development of Mathematical Physics. Madison, 1955.

Crossley, John N. and Henry, Alan S.

1. Thus Spoke al-Khwarizmi. A translation of Cambridge University Library Ms. il. vi. 5. - HM. 17, 1990, No 2, 103-133.

Cruz Hernandez, Miguel H.

1. La metafisica de Avicenna. Granada, 1949.
2. Abu'l-Walid ibn Rushd: vida, obra, pensamiento, influencia. Córdoba, 1986.
3. El pensamiento de Averroes y la posibilidad del nacimiento de la ciencia moderna. - Actas del XII Congresso Internacionale de Filosofia . 11, 1960, 76-77.
3. Historia del pensiamiento en el mundo islamico. 1-2. Madrid, 1981.

"Cultural Context"

1. The Cultural Context of Medieval Learning. Ed.J.E.Murdoch and E.D.Sylla. Dordrecht-Boston, 1975.

Cunbur, M.

1. Ali Kuşçu bibliyografyası. Ankara, 1974.

Cureton, William (1808-1864)

1. Pillar of the Creed of Sunnites. L., 1843.

Curtze, Maximillian (1837-1903)

1. Der liber trium fratrum de geometria. - NAALC. 49, 1885, 109-167.
2. Über den "Liber de similibus" des Ahmed ben Jusuf. - BM (2). 3, 1889, 15-16.

Czeglédy, Karoly

1. Die Karte der Donaulandschaftsgruppe nach al-Huwarizmi. - Acta orient. Acad. Sci. Hung., 1950, No 1, 46-79.

Czerminski, Adrian

1. Avicenna. Warszawa, 1953.

al-Dabbagh [ad-Dabbakh], Jamal ibn Jirjis (b. 1940)

1. Geometricheskiy traktat bagdadskikh matematikov IX veka Banu Musa. - IMEN. 5. M., 1966, 131-139.
2. Razvitiye infinitezimal'nykh metodov na srednevekovom Arabskom Vostoke. ADK (fm). M., 1966.
3. Izmereniye shara u Ibn al-Haysama. - FMSV. 2, 1969, 131-134.
4. Banu Musa. - DSB. 1, 1970, 443-446.
5. Infinitesimal Methods of Ibn al-Haitham. - Bull. College Sci., Baghdad. 11, 1970, 8-17.
6. Infinitezimal'nyye metody na srednevekovom Vostoke. - ACIHS XIII (M., 1971). 3-4, 1974, 80-82.
7. Risala muktashafa haditha li-Ibn al-Haytham. - Majalla kulliyya al-tarbiyya jami`a al-Fatih, Tarablus, 1978, No 7, 279-283.
8. Teoreticheskaya chast' knigi "al-Fakhri". - IMEN. 32, 1986, 89-100.

al-Dabbi (No 513)

1. Adh-Dhabbi. Desiderium quaerentis historiam virorum populi Andalusiae (Dictianorium biographicum). Ed. F.Codera et J.Ribero. - Bibliotheca Arabico-Hispana. 3, Matriti, 1885.

al-Daffa`, `Ali `Abdallah

1. A Brief History of Arabic Contribution to Mathematics. Ann Arbor, 1973; L., 1977.
2. Al-Jabr wa al-Muqàbala li'l-Khwarizmi. - ACIHS XV (Edinburgh, 1974). 1974, 14.
3. Al-Karkhi, mathematician. - Arabian J. of Science and Engineering. 2, 1976-1977, No 2, 131-132.

3a. The Moslem Contribution to Mathematics. L., 1977.

4. Thabit ibn Qurra's Extension of the Pythagorean Theorem. - ISHAS 1. 1, 1977, 145-153; II 1978, 4.
5. Nawadigh `ulama al-`arab wa'l-muslimin fi'l-riyadiyat. Nyu Yurk, 1978.
6. al-Madkhal `ala ta'rikh al-riyadiyyat `inda al-`arab wa'l-muslimin. Dhahran, 1981.
7. Athar al-`ulama al-`arab wa'l-muslimin wa tatwir `ilm al-falak. Dhahran, 1981.

al-Daffa, A. A. and Stroyls, J. J.

1. Numerical Analysis in the Middle East: Ninth through Fifteenth Century. - ISHAS 2, 1979, 53.
2. The Geometric Theory of Equations in the Near East in the Middle Age. - ACIHS XVI. 1981, I, 45.
3. Studies in the Exact Sciences in Medieval Islam. Dhahran, 1984.

"Defter"

1. Aksaray ve Valide Camii Şerif Kütübhanesi defteri. Istanbul, 1311 h. [1893-1894].
2. Defter-i Kütübhane-i Emir Hoca Kemankeş. Istanbul, undated.
3. Defter-i Kütübhane-i Es`ad Efendi. Istanbul, undated.
4. Defter-i Kütübhane-i Aşir Efendi. Istanbul, 1306 h. [1889].
5. Defter-i Kütübhane-i `Askeri Müze. Istanbul, undated.
6. Defter-i Kütübhane-i Atıf Efendi. Istanbul, 1310 h. [1892-1893].
7. Defter-i Kütübhane-i Ayasofya. Istanbul, 1304 h. [1887].
8. Defter-i Beşir Ağa kitabhanesi, Eyüp. Istanbul, undated.
9. Defter-i Kütübhane-i Beşir Ağa Bab-i `Ali. Istanbul, 1303 h. [1886].
10. Defter-i Kütübhane-i Bayazid. Istanbul, 1304 h. [1887].
11. Defter-i Kütübhane-i Çorlulu. Istanbul, 1303 h. [1886].
12. Defter-i Kütübhane-i Damad İbrahim Paşa. Istanbul, 1312 h. [1894-1895].
13. Defter-i Kütübhane-i Damad-zade Kazasker Mehmed Murad. Istanbul, 1311 h. [1893-1894].
14. Daftar-i Fatih kitabhanasi. Istanbul, undated.
15. Defter-i Kütübhane-i Feyzullah. Istanbul, undated.
16. Defter-i Kütübhane-i Hacı Selim Ağa. istanbul, 1310 h. [1892-1893].
17. Defter-i Kütübhane-i Hafid Efendi. Istanbul, 1312 h. [1894-1895].
18. Defter-i Kütübhane-i Hasan Hüsnü. Istanbul, undated.
19. Defter-i Kütübhane-i İsmihan Sultan. Istanbul, 1310 h. [1892-1893].
20. Defter-i Kütübhane-i Carullah. Istanbul, undated.
21. Defter-i Kütübhane-i Hüsrev Paşa. Istanbul, undated.
22. Köprülü Mehmed Paşa kütübhane defteri. Istanbul, undated.
23. Defter-i Kütübhane-i Laleli. Istanbul, 1311 h. [1893-1894].
24. Defter-i Kütübhane-i Mihrişah Sultan. Istanbul, 1310 h. [1892-1893].
25. Defter-i Kütübhane-i Molla Firuz. Istanbul, undated.
26. Defter-i Kütübhane-i Şeyh Murad Molla. Istanbul, 1310 h. [1892-1893].
27. Defter-i Kütübhane-i Nuruosmaniye. Istanbul, 1303 h. [1886].
28. Defter-i Kütübhane-i Kara Çelebizade. Istanbul, undated.
29. Defter-i Kütübhane-i Kara Mustafa Paşa. Istanbul, undated.
30. Defter-i Kütübhane-i Kılıç Ali Paşa. Istanbul, 1311 h. [1893-1894].
31. Defter-i Kütübhane-i Ragıb Paşa. Istanbul, 1310 h. [1892-1893].
32. Defter-i Kütübhane-i rasadhane-yi Kandilli. Istanbul, undated.
33. Defter-i Kütübhane-i Raşid Efendi. Kayseri, undated.
34. Daftar al-maktaba al-Sadiqiyya. Tunis, 1292 h. [1875].
35. Defter-i Kütübhane-i Selimiye. Istanbul, 1311 h. [1893-1894].
36. Defter-i Kütübhane-i Süleymaniye. Istanbul, 1310 h. [1892-1893].
37. Defter-i Kütübhane-i Veliyüddin. İstanbul, 1304 h. [1887].
38. Defter-i Kütübhane-i Yahya Efendi. 1310 h. [1892-1893].
39. Defter-i Kütübhane-i Yeni Medrese. Istanbul, 1310 h. [1892-1893].
40. Kütübhane-yi Umumi defteri. Istanbul, undated.
41. Hamidiyye kütübhanesinde mahfuz bulunan kütüb-i mevcudenin defteri. Istanbul, 1300 h. [1883].
42. Yeni Cami Kütübhanesinde mahfuz bulunan kütüb-i mevcudenin defteri. Istanbul, 1300 h. [1883].

Daiber, Hans

1. Ein Kompendium der Aristotelischen Meteorologica in der Fassung des Hunain ibn Ishaq. Amsterdam - Ox., 1975.
2. Early Cosmological Theories of the Arabs. Nazariyat al-`arab al-qadima fi `ilm al-kawn. - ISHAS 2, 1979, 102, Suppl. 46-47.

2a. Farabis Abhandlung über das Vakuum. Quellen und Stellung in der islamischen Wissenschaftsgeschichte. - Islam. 10, 1983, 17-47.

3. Abhandlung über das Vakuum: Quellen und Stellung in der islamischen Wissenschaftsgeschichte. Der Islam. 60, 1983, 37-47.
4. Qosta ibn Luqa (9. Jh.) über die Einteilung der Wissenschaften. - ZGAIW. 6, 1990.

Daiber, Hans and Rageb, F.J.

1. Al-Tusi, Nasir al-Din.- EI^2, X, 2000, 746-752.

Dagher, J. A.

1. Répertoire des bibliothèques du Proche et du Moyen Orient. P., 1951.

Daghir, K. and Saffuri, M.

1. On the Extraction of the Chords. Beirut, 1968.

al-Daghistani, `Ali Efendi Hilmi

1. Fihrist al-kutub al-farisiyya wa'l-jawiyya al-mahfuza bi'l-Kutubkhana al-Khidiwiyya al-Misriyya. al-Qahira, 1306 h. [1889].
2. Fihrist al-kutub al-turkiyya al-mawjuda bi'l-Kutubkhana al-Khidiwiyya. al-Qahira, 1306 h. [1889].

Dalila, Aref

1. The Place of Ibn Khaldun's Thought in Political Economy. Makana al-afkar al-iqtisadiyya li-Ibn Khaldun fi'l-iqtisad al-siyasi - ISHAS 1, I, 1977, 845-847; II, 1978, 361-365.

Dallal, Ahmad. (b. 1957)

1. Al-Biruni on Climates. - AIHS. 34, 1984, No 112, 3-18.
2. Biruni's Book on Pearls Concerning the Projection of Spheres. - ZGAIW. 4, 1987/88, 81-138.
3. A Non-Ptolemaic Lunar Model from Fourteenth-century Central Asia. - ASP. 2, 1992, 237-294.
4. Ibn al-Haytham's Universal Solution for Finding the Direction of the Qibla by Calculation. - ASP. 5, 1995, 145-193.
5. An Islamic Response to Greek Astronomy: Kitab Ta`dil Hay'at al-Aflak of Sadr al-Shari`a. Edition, Translation, and Commentary. Leiden - N.Y. - Köln, 1995.
6. Sadr al-Shari`a. - ENWC. 1997, 874.

al-Damardash, Ahmad Sa`id

1. Istikhraj al-awtar fi'l-daira bi khawass al-khatt al-munhani al-waqi` fiha li'l-Biruni. - Risala al-`ilm. 1961, No 2, 118-136; 1961, No 3, 196-237.
2. Bayna Hirun wa'l-Biruni. - Risala al-`ilm. 1961, No 4, 274-284.
3. Al-Asbab huduth al-huruf li-Shaykh al-Rais Ibn Sina. - Risala al-`ilm. 1962, No 4, 232-252.
4. Risala Jamshid al-Kashi ila walidihi. - Risala al-`ilm. 1963, No 4, 72-104.
5. Al-Hasan ibn al-Haytham. al-Qahira, 1969.

5a. al-Birkar al-tamm wa'l-qutu` al-makhrutiyya. - MMMA. 22, 1976, 321-343.

6. The Indivisible Element in the Manuscript of al-Shahristany as a Token of Per-cussion between Islamic Scientists and Mathematics. al-Jawhar al-fard fi makhtut al-Shahristani unmudhaj li-irtitam `ilm al-kalam ma` al-fikr al-`ilmi al-riyadi. - ISHAS 2, 1979, 85, 158-159.

Dana Sirusht, Akbar

1. Naqsh-i Khwaja dar Tahrir-i Uqlidis. - "al-Tusi" [2], 1957, 220-224.
2. Risala fi tastih al-kura ma` talkhisha farisiyya. Tehran, 1353 s.h. [1974].

Dani, Ahmad Hasan

1. Al-Biruni's Indica - A re-Evaluation. - "al-Biruni" [9], 1979, 182-189.

Danish-Pazhuh, Muhammad Taqi

1. Fihrist-i kitabkhana-yi ihda'i-yi Aqa-yi Sayyid Muhammad Mishkat ba kitabkhanayi Danishgah-i Tehran. 3, Tehran, 1331 s. h. [1953].
2. Fihrist-i kitabkhana-yi markazi-yi Danishgah-i Tehran. 3-15, Tehran, 1332-1345 s.h. [1953-1966].
3. Fihrist-i kitabkhana-yi Danishkada-yi Adabiyyat. 1-3, Tehran, 1339-1344 s.h. [1960-1965].
4. Fihrist-i nuskhaha-yi khatti-yi kitabkhana-yi Danishkada-yi Huquq wa `Ulum-i siyasi wa iqtisadi-yi Danishgah-i Tehran. Tehran, 1339 s.h. [1961].
5. Fihrist-i nuskhaha-yi khatti-yi duktur Asghar Mahdawi. - NKMDT. 2, 1963, 59-181.
6. Fihrisr-i nuskhaha-yi khatti-yi Muza-yi Iran Bastan. - NKMDT. 2, 1963, 199-218.
7. Fihrist-i kitabkhana-yi Majlis-i Sana. - NKMDT. 2, 1963, 219-257.
8. Fihrist-i kitabkhanaha-yi shahristanha (Tabriz - Kashan - Yazd - Isfahan). - NKMDT. 4, 1966, 283-480.
9. Fihrist-i mikrufilmha-yi Kitabkhana-yi Markazi-yi Danishgah-i Tehran. Tehran, 1348 s.h. [1969].

10. Fihrist-i nuskhakha-yi khatti-yi kitabkhana-yi Majlis-i Sana. - NKMDT. 6, 1970, 427-587; 7, 1974, 141-276.
11. Fihrist-i nuskhaha-yi khatti-yi Mujtaba Minuwi. - NKMDT. 6, 1970, 637-690.
12. Jabr-i Khwarizmi. - "Al-Khwarizmi" [3], 1984, 55-64.

Danish-Pazhuh, M. T., Shirazi, Ibn Yusuf, and Munzawi, `Ali Naqi

1. Fihrist-i kitabkhana-yi Madrasa-yi `Ali-yi Sipahsalar. 1-5. Tehran, 1315-1348 s.h. [1936-1970].

Darmstaedter, Ernst (1877-1938)

1. Die Alchemie des Geber. B., 1929.

Darwish, `Ali (No 1128)

1. Traktat o muzyke (1-2 glavy). Per. P.R.Rajabova. - "Muzykal'naya estetika" [1], 1967, 318-320.

Datta, Birhy Bibhutibhusan (1883-1965)

1. Introduction of Arabic and Persian Mathematics into Sanskrit Literature. - Proc. of Benares Math. Society. 14, 1932, 7-21.

Daunicht, Hubert

1. Der Osten nach Erdkarte al-Huwarizmis. 1-4. Bonn, 1968-1970.
2. Die Kenntnis Japans bei den alten Kulturvölkern. Leer, 1985.

Davidian, Maria Louise

1. Al-Bruni on the Time of Day from Shadows Length. - JAOS. 80, 1960, No 4, 330-335; "Kennedy" [1], 1983, 274-279.

Davidian, M. L. and Kennedy E. S.

1. Al-Qayini on the Duration of Dawn and Twilight. - JNES. 20, 1961, No 3, 145-153; "Kennedy" [1], 1983, 284-292.

Dawari, Rida

1. Falsafa-yi madaniyi Farabi. Tehran, 1354 s.h. [1975].

al-Dawwani (No 894)

1. Akhlaq-i Jalali. Calcutta, 1225 h. [1810]; Nawalkishar, 1283 h. [1868]; Lucknow, 1324 h. [1906].

Debarnot, Marie-Thérèse

1. Introduction du triangle polaire par Abu Nasr b. `Iraq. - JHAS. 2, 1978, No 1, 126-136.
2. Un calcul d'astronomie sphérique de Habash al-Hasib. Hisab `ilm al-falak al-kurawi li-Habash al-Hasib. - ISHAS 2, 1979, 54, Suppl. 44-45.
3. al-Biruni: Kitab Maqalid `Ilm al-Hay'a. La trigonométrie sphérique chez les Arabes de l'Est à la fin du Xe siècle. Damas, 1980.
4. The Zij of Habash al-Hasib: a Survey of MS Istanbul Yeni Cami 784/2. - "From Deferent to Equant" [1], 1987, 35-69.
5. Trigonometry. - EHAS. II, 1996, 495-538.

Debski, Wojciech

1. Katalog rekopisów orientalnych ze zbiorów polskich. 5. Katalog rekopisów arabskich. Warszawa, 1964.

Decourdemanche, J. A.

1. Note sur l'estimation de la longueur de degré terrestre chez les Grecs, les Arabes et dans l'Inde. - JA (11). 1, 1913, 427-444; "Mathematical Geography" [7], 1992, 384-401.

Delambre, Jean Baptiste (1749-1822)

1. Histoire de l'astronomie du Moyen Age. P., 1819.

Delaporte, L. J.

1. La chronographie d'Elie bar Shinaya. P., 1910.

Delphin, M.

1. L'Astronomie au Maroc. - JA(8). 17, 1891, 177-201.

Demidchik, Vladimir Pavlovich

1. Opisaniye "shestogo i sed'mogo klimatov" v "Asar-al-bilad" al-Kazwini. - Vostochnaya filologiya. 2. Dushanbe, 1974, 26-68.
2. Kosmologiya al-Farabi i yeyo osnovnyye istochniki. - "al-Farabi" [1] 1975, 13-30.
3. "Geologiya" al-Kazwini. - Vostochnaya filologiya. 4. Dushanbe, 1976, 75-97.
4. "Geografiya" ili "Pamyatniki stran i predaniya o lyudyah" Zakariya al-Kazwini. Dushanbe, 1977.
5. Zakariya al-Kazwini i zhanr mirabiliy v arabskoy literature do XIV v. ADD(fl). M., 1979.

Demidova M. I. and Kostygova G. I.

1. Fondy rukopisey i pechatnyh izdaniy na yazykakh narodov Vostoka v Gosudarstvennoy Publichnoy biblioteke. - "Vostokovednyye fondy" [1], 1963, 156-171.

Derenbourg, Hartwig (1844-1908)

1. Les manuscrits arabes de l'Escurial. 1. Grammaire. Rhétorique, Poésie, Philologie et Belles-Lettres, Lexicographie, Philosophie. P., 1884.
2. Les manuscrits arabes de l'Escurial. 2:1. Morale et Politique. P., 1903.
3. Notes critiques sur les manuscrits arabes de la Bibliothèque Nationale de Madrid. P., 1904.
4. L'histoire des philosophes attribué à Ibn al-Qifti. - Opuscules d'un arabisant. P., 1905, 37-48.
5. Les manuscrits arabes de l'Escurial. 3. Théologie, Géographie, Histoire. Revues et mises à jour par E.Lévi-Provençal. P., 1928.
6. Les manuscrits arabes de l'Escurial. 2:2. Médecine et Histoire Naturelle. Revues et complétées par H.P.J.Renaud. P., 1939.
7. Les manuscrits arabes de l'Escurial. 2:3. Sciences exactes et Sciences occultées. Revues et complétées par H.P.J.Renaud. P., 1941.

Destombes, Marcel

1. Note sur le catalogue d'étoiles du calife al-Mamoun. - ACIHS VIII (Florence-Milan, 1956). 1958, 309-312.
2. Globes célestes et catalogues d'étoiles orientaux du Moyen Ages. - ACIHS VIII (Florence-Milan, 1956). 1958, 313-324.
3. Une globe céleste inédit de l'époque Seldjoukide (539 de l'hégire). - ACIHS IX (Barcelona, 1959). P., 1961, 447-452.
4. Un astrolabe carolingien et l'origine de nos chiffres arabes. - AIHS, 1962, No 58-59, 3-45.
5. Selected Contributions to the History of Cartography and Scientific Instruments. P. 1987.

Deverdun, G.

1. Ibn al-Kadi. - EI^2. 3, 1971, 814.

De Young, Gregg

1. The Arithmetic Books of Euclid's "Elements" in the Arabic Tradition. Dissertation. Cambridge, Mass., 1981.
2. The Arabic Textual Tradition of Euclid's "Elements". - HM. 11, 1984, 147-160.
3. The Khulasat al-Hisab of Baha's al-Din al-'Amuli and the Dars-i-Nizami in India. - Ganita Bharati, 8, 1986, No 1-4, 1-15.

3a. Abu Sahl's Additions to Book II of Euclid's "Elements". - ZGAIW. 7, 1991/92, 51-80.

4. Ishaq ibn Hunayn, Hunayn ibn Ishaq, and the Third Arabic Translation of Euclid's "Elements". - HM. 19, 1992, 188-199.
5. Ibn al-Sari on ex aequali Ratios: His Critique of Ibn al-Haytham and His Attempt to Improve the Parallelism between Books V and VII of Euclid's "Elements". - ZGAIW. 9, 1994, 99-152.
6. Euclidean Geometry in the Mathematical Tradition of Islamic India. - HM. 22, 1995, No 2, 138-153.
7. "Ex aequali" Ratios in the Greek and Arabic Euclidean Traditions. - ASP. 6, 1996, No 2, 163-165.
8. Al-Hajjaj. - ENWC. 1997, 392.
9. Ikhwan al-Safa. -ENWC. 1997, 444.
10. Ishaq ibn Hunayn. - ENWC. 1997, 454-455.
11. Maragha. - ENWC. 1997, 599-601.
12. Observatories in the Islamic World. - ENWC. 1997, 792-793.
13. Qadi Zadeh al-Rumi. - ENWC. 1997, 830.
14. Al-Samarqandi. - ENWC. 1997, 881.
15. Qadi Zade al-Runi's Commentart on Ashkal al-Ta'sis. - ACIHS XX, 1997, 48.

16. The Ashkāl al-Ta'sīs of al-Samarqandī: a translation and study.- ZDAIW. 14, 2001, 57-117.

Dhabbar, Basmanji Nasarvanji

1. Descriptive Catalogue of All Manuscripts in the First Dastur Meherji Rana Library. Navsari. Bombay. 1923.

Dhanani, Alnoor

1. The Physical Theory of Kalam. Atoms, Space, and Void in Basrian Mu'tazili Cosmology. Leiden - N.Y. - Köln, 1994.
2. Atomism in Islamic Thought. - ENWC. 1997, 139-142.

Diercks, S.

1. Die Araber im Mittelalter und ihr Einfluss auf die Kultur Europas. Lpz., 1882.

Dieterici, Friedrich (1821-1903)

1. Naturwissenschaft und Naturausschauung der Araber. B., 1861.
2. Die arabische Ansschauung der Welt und der Erde im 10. Jahrhundert unserer Zeitrechnung. Aus dem Arabischen bearbeitet. - Zeitschr. der allgemeinen Erdkunde. 11, 1861, 40-57; "Islamic Geography", 1992, 156-174.
3. Zahl und Maaß nach den arabischen Philosophen "die lautern Bruder". - ZDMG. 18, 1864, 691-698.
4. Die Propaedeutik der Araber im zehnten Jahrhundert. B., 1865.
5. Die Logik und Psychologie den Araber im zehnten Jahrhundert n. Chr. B., 1868.
6. Die Anthropologie der Araber im zehnten Jahrhundert n. Chr. Lpz., 1871.
7. Die Lehre von der Weltseele bei der Arabern im 10. Jahrhundert. Lpz., 1872.

7a. Die Philosophie bei den Arabern im 10. Jahrhundert n. Chr. 1-14. Lpz., 1876-1886; Olms, 1969.

8. Einleitung zu Alfarabis philosophischen Abhandlungen. - al-Farabi [3] , 1892, 1-47.
9. Alfarabi als Begründer der arabischen Philosophie. - al-Farabi [5], 1900, 1-79.

Dietrich, A.

1. Ibn al-Qifti. - EI^2. 3, 1971, 840.

"Diffusione delle scienze"

1. La diffusione delle scienze islamiche nel medioevo Europeo". Convegno internazionale. Roma, 2-4 ottobre 1984. Roma, 1987.

Digby, Simon

1. Humayun. - EI^2. 3, 1971, 575-577.

Dihkhuda, `Ali Akbar

1. Sharh-i hal-i nabigha-yi shahir-i Iran Abu Rayhan Muhammad ibn Muhammad Khwarizmi Biruni. Tehran, 1324 s.h. [1945], 1352 s.h. [1973].

Dilgan, Hamit (d. 1976)

1. Bibliothèques d'Istanbul. - İstanbul Teknik Üniverersitesi Belleteni. 8, 1955, 36-41.
2. Büyük Türk alimi Nasireddin Tusi. Istanbul, 1956.
3. Sur un problème indéterminé d'Ibni Hamza. - İstanbul Teknik Üniversitesi Belleteni. 10, 1957, 1-5.
4. Nassireddin Toussi, grande scieziato matematico. - ACIHS VIII (Florence-Milan, 1956). 1958, 1, 183-191.
5. Büyük matematikçi Ömer Hayyam. Istanbul, 1959.
6. Démonstration du V^e Postulat d'Euclide par Schams-ed-Din Samarkandi. Introduction de l'ouvrage Aschkal-üt-teessis. - RHSA. 13, 1960, No 3, 191-196.
7. Sur une théorème isoperimétrique d'Ibn-i-Haitham. - ACIHS IX (Barcelona-Madrid, 1959). 1961, 453-460.
8. Qadi Zada al-Rumi. - DSB. 11, 1975, 227-229.
9. Al-Samarqandi. - DSB. 12, 1975, 91.

al-Dimashqi (No 691)

1. Chems-ed-Din Abou-Abdallah Mohammed ed-Dimichqui. Cosmographie, publiée, commencée par M.Fraehn, d'après les manuscrits de St.Pétersbourg, de Paris, de Leyden et de Copenhague, par A.F.Mehren. St.Pétersbourg, 1866; reéd. par Fuat Sezgin, F.M., 1994.
2. Shams ad-Din Abou-'Abdallah Moh'ammed de Damas. Manuel de la cosmographie du moyen age, traduit de l'Arabe "Nokhbet ed-Dahr fi `Adjaib-il-birr wal-bah'r" et accompagné d'éclaircissements par A.F.Mehren. Copenhague, 1874; reéd. par Fuat Sezgin, F.M., 1994.

3. Nukhba al-dahr fi `ajaib al-barr wa'l-bahr. Laybzigh, 1923.

Dinorshoyev, Muso

1. Filosofiya Nasiriddina Tusi. Dushanbe, 1968.
2. Ibn Sina i yego filosoffskiye vozzreniya. - Ibn Sina [44], 1980, 5-54.
3. Filosofskaya ontologiya Ibn Siny. - "Ibn Sina" [12], 1980.
4. Naturfilosofiya Ibn Siny. Dushanbe, 1985.

Diophantus (3rd c. A.D.)

1. Sina`a al-jabr li-Diyufantus al-Iskandarani. Tarjama Qusta ibn Luqa, haqaqahi wa qaddama lahu Rushdi Rashid. al-Qahira, 1975.
2. Les aritmétiques. 3 - Livre IV. 4 - Livres 5-7. Texte établi et traduit par R.Rashed. P., 1984.

al-Diwaji, Sa`id

1. Khizana Sa`id al-Diwaji. - MMMA. 9, 1963, 203-230.

Diwald, Susanne

1. Arabische Philosophie und Wissenschaft in der Enzyklopädie "Kitab Ikhwan as-safa" (III): Die Lehre von Seele und Intellekt. Wiesbaden, 1975.

Dizer, Muammer (1924-1993)

1. Kandilli Rasathanesi yazma eserler kataloğu. Istanbul, 1973.
2. The Da`irat al-Mu`addal in the Kandilli Obsevatory, and Some Remarks on the Earliest Recorded Islamic Values on the Magnetic Declination. - JHAS. 1, 1977, No 2, 257-260.
3. The Astrolabe of Taqi al-Din at Kandilli Observatory. - ISHAS 2, 1979, 55-56.
4. Nasir El-Din El-Tusi'nin Muhtasar fi `ilm al-tenjim ve ma'rifat al-takvim (Risale-i Si Fasl)'inin Ahmed-i Dai tarafindan Türkçe çevirisi. Istanbul, 1984.

Djafari [Ja`fari] Naini, Alireza [`Ali Rida]

1. Geschichte der Zahlentheorie im Orient im Mittelalter und zu Beginn der Neuzeit unter besonderer Berückrichtigung persischer Mathematiker. Braunschweig, 1982.
2. A New Type of Numbers in a Seventeenth Century Manuscript: al-Yazdi on Numbers of Equal Weight. - JHAS. 7, 1983, 125-139.
3. Khwarizmi u athar-i u. - "al-Khwarizmi" [3], 1984, 89-104.

Djebbar [Jabbar], Ahmed

1. Enseignement et recherches mathématigues dans le Maghreb des XIIIe-XIVe siècles. P., 1980.
2. Deux mathématiciens peu connus de l'Espagne du XIe siècle: al-Mu'taman et Ibn Sayyid. P., 1984; "Vestigia" [1], 1993, 79-91.
3. L'analyse combinatoire au Maghreb: l'Ibn Mun`im. P., 1985.

3a. Les nombres figurés dans la tradition mathématique de l'Andalusie et du Maghrib. - Orsay, 1985,

4. Quelques aspects de l'algèbre dans la tradition mathématique Arabe de l'Occident musulman. - "al-Multaqi" [I], 1986, 8-9.
5. Histoire des mathématiques arabes. Alger, 1986.
6. La rédaction de L'Istikmal d'al-Mu'taman (XIe s.) par Ibn Sartaq, un mathématicien des XIIIe-XIVe siècles. - HM. 24, 1997, No 2, 185-192.
7. Combinatorics in Islamic Mathematics. - ENWC. 1997, 230-232.
8. Ibn al-Yasamin. - ENWC. 1997, 414-415.
9. Ibn Mun`im. - ENWC. 1997, 427-428.
10. Al-Qalasadi. - ENWC. 1997, 830-832.

Dmitriyeva, Lyudmila Vasil'yevna and Muratov, Sayfi Nizamovich

1. Opisaniye tyurkskikh rukopisey Instituta Vostokovedeniya AN SSSR. 2. M., 1975.

Dobraca, Kasim

1. Katalog arapskih, turskih i perzijskih rukopisa. Gazi Husrevbegona biblioteka u Sarajevu. 1. Sarajevo, 1963.

Dobrovol'skiy, Oleg Vasil'yevich and Abdulla-zade Kh. F.

1. Astronomicheskoye naslediye Ibn Sina. - IAN Taj. SSR, otd. fiz.-mat., khim. i geol. nauk. 1980, No 3, 5-15.

Dobrovol'skiy, O. V., Kahhorov, Abdullo, and Khojiyev, Ilkhom

1. Sovershennyye i drujestvennyye chisla na srednevekovom Vostoke. - IAN Taj. SSR, otd. fiz.-mat., khim. i geol. nauk. 1976, No 3, 24-28.

D'Ohsson, Mouradgea

1. Tableau Général de l'Empire Ottoman. 1, P., 1787.

Dold-Samplonius, Yvonne

1. Y.Samplonius. Die Konstruktion des regelmässigen Siebenecks nach Abu Sahl al-Quhi Weiğan ibn Rustam. - Janus. 50, 1963, 227-249.
2. al-Khazin. - DSB. 7, 1973, 334-335.
3. al-Mahani. - DSB. 9, 1974, 21-22.
4. al-Quhi. - DSB. 11, 1975, 239-241.
5. Al-Sijzi. - DSB. 12, 1975, 431-432.
6. Sinan ibn Thabit ibn Qurra. - DSB. 12, 1975, 447-448.
7. Book of Assumptions by Aqatun, Text - Critical Edition. Amsterdam, 1977.
8. Some Remarks on the "Book of Assumptions" by Aqatun. - JHAS. 2, 1978, No 2, 255-263.
9. The Kitab al-Mafrudat by Thabit ibn Qurra. - ISHAS 2, 1979, 57.
10. Ob algebraicheskom uravnenii al-Khorezmi - IV sluchay, $cx^2+bx=a$. - "al-Khwarizmi" [1], 1983, 109-115.
11. The Solution of Quadratic Equations according to al-Samav'al. - "Mathemata" [1], 1985, 95-104.
12. Developments in the Solution of the Equation $cx^2+bx=a$ from al-Khwarizmi to Fibonacci. - "From Deferent to Equant" [1], 1987, 71-87.
13. Quadratic Equations in Arab Mathematics. - "Blütezeit", 1990. 67-78.
14. The XVth Century Timurid Mathematician Ghiyath al-Din al-Kashi and his Computation of the Qubba. - "Amphora", 1992, 171-181.
15. Practical Arabic Mathematics. Measuring the Muqarnas by al-Kashi. - Centaurus, 35, 1992, 193-242.
16. The Volume of Domes in Arabic Mathematics. - "Vestigia" [1], 1993, 93-106.
17. The "Book of Assumptions" by Thabit ibn Qurra. - History of Mathematics, 1996, 207-222.
18. Abu'l-Wafa. - ENWC. 1997, 8-9.
19. Al-Mahani. - ENWC. 1997, 544-545.
20. Al-Quhi or al-Kuhi. - ENWC. 1997, 837-839.
21. Al-Sijzi. - ENWC. 1997, 898-899.
22. Sinan ibn Thabit. ENWC. 1997, 902.
23. Al-Kashi's Calculations on Islamic Architecture. - ACIHS XX, 1997, 59.

Dold-Samplonius, Y. and Hermelink, H.

1. al-Jayyani. - DSB. 7, 1973, 82-83.

Doncel, M. G.

1. Quadratic Interpolations in Ibn Mu'adh. - AIHS. 32, 1982, 68-77.

Dondua, Karpez Darispanis dze (1891-1951)

1. Hudayat al-nujumi da saimiso sparsul-kartuli leksikoni. Hidaya al-nujum et le glossaire persan-géorgien de Vakhtang. - Sparsul-kartuli tzdani. - Études persanes-géorgiennes. I. Lg, 1926, 54-81.

Dorn, Bernhard [Boris Anreyevich] (1805-1881)

1. Catalogue des manuscrits et xylographes orientaux de Bibliothègue Impériale Publique de St.-Pétersbourg, 1852.
2. I. Bericht über einige vom wirkl. Staatsrath Chanykow vom Astrabad dem Asiatischen Museum übersandte Geschenke. II. Bericht über eine vom wirrkl. Staatsrath Chanykow dem Asiatischen Museum aus Meschhed zugekommene Sammlung. III. Bericht über die vom wirkl. Staatsrath Chanykow aus Herat eingegangene Sendung von morgenländischen Handschriften. IV. Bericht über drei vom wirkl. Staatsrath Chanykow eingesandte afghanische Handschriften. - Mélanges Asiatiques tirés du Bull. de l'Académie Impériale des Sciences de St.-Pétersbourg. 3, No 4, 1859, 490-501, 532.
3. Ueber die vom wirkl. Staatsrath Chanykow dem asiatischen Museum zugekommenen Sendungen von morgenländischen Münzen und Handschriften. - Mélanges Asiatiques tirés du Bulletin de l'Académie Impériale des Sciences de St.-Pétersbourg. 4, No 1, 1860, 29-62.
4. Die Sammlung von morgenländischen Handschriften, welche die Kaiserliche Öffentliche Bibliothek zu St.-Petersburg im Jahre 1864 von Hrn v. Chanykov erworben hat. SPb., 1865.

5. Drei in der K. Bibliothek zu St.-Petersburg befindliche astronomische Instrumente mit arabischen Inschriften. - Mémoires de l'Académie Impériale de sciences de St.-Pétersbourg. (7)9, No 1, 1866.
6. Manuscrits orientaux de la Bibliothèque Impériale Publique provenant de la succession de M. le Comte Simonitsch. - Mémoires de l'Académie Impériale de sciences de St.-Pétersbourg. (7), 14, 1870, 34-47.

Dorofeyeva, Alla Vladimirovna

1. Omar Khayyam. 1048-1131. - Matematika v shkole, 1989, No 2, 145-149.

Dosay, M.

1. Kereci'nin "Hesab al-Cebr ve'l-Mukabele" Adli Eseri. - Ankara, 1991.

Dovlatova, Laura Isayevna (b. 1922)

1. Osnovaniya planimetrii v pervykh chetyryokh knigakh "Tahrir Eglidis" Nasireddina Tusi (po rimskomu izdaniyu 1594 goda). - Letopis' nauki v Azerbayjane. I. Baku, 1969, 45-50.
2. Planimetriya Nasireddina al-Tusi v knige IV "Tahrir Eglidis". - TKNA XIII(m). 1970, 25-33.
3. Traktat Ibn Siny "Ob issledovanii ugla" v izlozhenii Kutbeddina Shirazi. - Nekotoryye voprosy issledovaniya istorii yestestvoznaniya v Azerbayjane. Baku, 1971, 6.

Dovlatova, L. I. and Quliyeva, G. Z.

1. Paradoks "Aristoteleva kolesa" u Kutbeddina Shirazi. - Trudy IV Zakavkazkoy konf. po istorii nauki. Yerevan, 1974, 162-168.

Dowson, Christopher

1. The Making of Europe. An Introduction to the History of European Unity. N.Y., 1932, 1956.

Dozy, Reinhart P. A. (1820-1883)

1. Die Cordovaner 'Arib ibn Sa'd der Secretär und Rabi ibn Zaid der Bischof. - ZDMG. 20, 1866, 590-609.

Dozy, R. P. A. and de Goeje, M. J.

1. Description de l'Afrique et de l'Espagne par Edrisi. Texte arabe publié pour la première fois d'après les manuscrits de Paris et Oxford avec une traduction, des notes et un glossaire. Leiden, 1866; reéd. par Fuat Sezgin. F.M., 1992.

Dozy, R.P. and Pellat, Ch.

1. Le Calendrier de Cordoue. Leyde, 1961.

Drechsler, A.

1. Der arabische Himmelglobus des Mohammed ben Muyid el-Din el-Ordhhi. Dresden, 1922.

Dreyer, John Louis Emil (1852-1926)

1. A History of Astronomy from Thales to Kepler (formerly titled History of the Planetary Systems from Thales to Kepler). Cambridge, 1953.

Druart, Thérèse Anne

1. Al-Razi's Conception of the Soul. Psychological Background to His Ethics. - Medieval Philosophy and Theology. 5, 1996, 245-263.

Dugat, Gustave (1824-1894)

1. Notice sur al-Makkari. - al-Maqqari [1], 1855, XIX-XCVI.
2. Histoire des philosophes et théologiens musulmans de 632 à 1258: scènes de la vie religieuse en Orient ou l'histoire des luttes entre les écoles théologiques et les écoles philosophiques. Amsterdam, 1878; 1973.

Duhem, Pièrre (1861-1916)

1. Les origines des statiques. 1. P., 1905.
2. Le système du monde. Histoire des doctrines cosmologiques, de Platon à Copernic. 1-10. P., 1913-1959; 1954-1984.

Dumont, M.

1. Mohammed ibn Mousa al-Khowarismi. - Revue générale des sciences pures et appliquées (2). 54, 1947, 7-13.

Dunlop, D. M.

1. Ibn Bajjah's Tadbiru'l-Mutawahhid (Rule of the Solitary). - JRAS. 1945, No 1-2, 61-81.
2. The Ǧawami` al-`ulum of Ibn Farigun. - 60 doğum münasebetiyle Zeki Velidi Togan'a Armağan. Symbolae in honorem Z.V.Togan. Istanbul. 1950-1955, 348-353.
3. al-Bayhaqi. - EI². 1, 1960, 1131-1132.
4. Al-Farabi's Introductory Sections on Logic. - The Islamic Quarterly. 2, 1955, 264-282.
5. Al-Farabi's Eisagoge. - The Islamic Quarterly. 3, 1956, 117-138.
6. Al-Farabi's Paraphrase of the Categories of Aristotle. - The Islamic Quarterly. 4, 1958, 168-197; 5, 1959, 21-54.
7. al-Balkhi. - EI². 1, 1960, 1003.
8. Al-Dimashqi. - EI². 2, 1965, 291.
9. The Arabic Manuscripts of the Academia das Ciéncias de Lisboa. - Actas del Primer Congreso de Estudios Arabes y islamicos. Madrid, 1964, 285-291.
10. Ibn Badjdja. - EI². 3, 1971, 728-729.
11. The Mudhakarat fi `Ilm an-Nujum (Dialogues on Astrology) Attributed to Abu Ma`shar al-Balkhi (Albumasar). - Iran and Islam. Edinburgh, 1971, 229-246.

Eastwood, Bruce.

1. Alhazen, Leonardo, and Late Medieval Speculations on the Inversion of Images in the Eye. - Annals of Sciences. 43, 1986, 413-446.

Eche, Y.

1. Les bibliothèques arabes. Damas, 1967.

Edhem, Fehmi and Stchoukine, Ivan

1. Les manuscripts orientaux illustrés de la Bibliothèque de l'Université de Stamboul.- Mémoires de l'Institut Français d'Archéologie de Stamboul. I. P., 1933.

Edwards, S. M.

1. Babur: Diarist and Deshot. L., 1926.

Efendiyev, G. H.

1. Mahammad Nasiraddinin mineralogiya dair almi asari haqqynda. O mineralogicheskom traktate Muhammeda Nasireddina. - "al-Tusi" [1], 1951, 28-30, 59-61.

Ehgamberdiev, Sh. A.

1. The Astronomical School of Ulugh Beg. - Sky and Telescope. 1995, No 11, 38-40.

Ehlers, Dietrich

1. Aristoteles, Proklos und Avicenna über philosophische Probleme der Mathematik. - "Ibn Sina" [12], 1980, 1, 88-94.

Ehrig-Eggert, Carl

1. Yahya ibn `Adi: Über den Nachweis der Natur des Möglichen. Edition und Einleitung. - ZGAIW. 5, 1989, 283-297.
2. Karl Irij-Ijirt. "Fi ithbat tabi`a al-mumkin" li-Yahya ibn `Adi. - ZGAIW. 5, 1989, arab. 54-63.

Ekblom, Richard

1. Idrisi und die Ortsnamen der Ostseeländer. - Namn och Bygd. Tidskrift for Nordisk Ortsnamnforskning. Uppsala, 19, 1931, 1-81; "Studies on al-Idrisi" [3], 1992, 261-341.
2. Le noms de lieu baltiques chez Idrisi. - Ann. Acad. Sci. Fenn, Helsinki, ser. B, 27, 1932, 14-21; "Studies on al-Idrisi". 3, 1992, 342-349.

Elamrani-Jamal, A.

1. Ibn Rušd et les "Premiers Analytiques" d'Aristote. Aperçu sur un problème de syllogistique modale. - ASP. 5, 1995, No 1, 57-74.

Elgood, C.

1. Persian Science. - The Legacy of Islam. 1953, 292-317.

Ellis, A.G. and Edwards, E.

1. A Descriptive List of the Arabic Manuscripts Acquired by the Trustees of the British Museum since 1894. L., 1912.

Elwell-Sutton, Laurence Paul

1. Al-Biruni on the Astrolabe. - "al-Biruni" [12]. II, 1976, 113-127.

"Encyclopedia"

1. Encyclopedia of the History of Arabic Science. Ed. by R.Rashed. I. Astronomy - Theoretical and Applied. II. Mathematics and Physical Sciences. II. Technology, Alchemy and Life Sciences. L. - N.Y., 1996.

Endress, Gerhard

1. The Works of Yahya ibn 'Adi, an Analytical Inventory. Wiesbaden, 1977.
2. Yahya ibn 'Adi's Critique of Atomism. Naqd al-nazariyat adhli Yahya ibn `Adi. - ISHAS 2, 1979, 125, Suppl. 7-8.
3. Yahya ibn `Adi's Critique of Atomism. Three Treatises on the Indivisible Part. Ed. with an Introduction and Notes. ZGAIW. 1, 1984, 155-179.
4. Die arabisch-islamische Philosophie. Ein Forschungsbericht. - ZGAIW. 5. 1989, 1-47.
6. Averroes' "De Coelo". Ibn Rushd's Cosmology in His Commentary on Aristotle's "On the Heavens". - ASP. 5, 1995, No 1, 9-50.

Enestrom, Gustav [Gosta] (1852-1923)

1. Sur une formule d'approximation des racines carrées donnée par Alkalsadi. - BM (1). 3, 1886, 236-239.
2. Ueber Spuren der komplementaren Multiplikation bei arabischen Mathematikern. - BM (3). 7, 1906.

Ergin, Osman Nuri (1883-1961)

1. İbn Sina bibliografyası. Istanbul, 1937; 1956.

d'Erlanger, Rodolphe

1. La musique arabe. 1-6, P., 1930-1956.

Erskine, William

1. A History of India under Two First Sovereigns of the House of Taimur, Baber and Humayun. L., 1854.

Esenov, Shahmardan and Qasymjanov, Agyn Khayrulla uly

1. Problema klassifikatsii nauk u al-Farabi. - ACIHS XIII (M., 1971). 3-4, 1974, 180-182.

Ess, J. van

1. Dirar b. `Amr und die "Cahmiya". Biographie einer vergessener Schule. - Der Islam. 43, 1967, 241-279.

"Estudios sobre historia"

1. Estudios sobre historia de la ciencia arabe. Ed. por J.Vernet. Barcelona, 1980.

Ethé, Hermann (1844-1917)

1. Nasir bin Khusrau's Leben, Denken und Dichten. Actes du VI Congrs international des orientalistes. Leiden, 1885.
2. Catalogue of Persian Manuscripts in the Library of the India Office. 1-2. Ox., 1903-1937.

Eves, H.

1. Omar Khayyam's Solution of Cubic Equation. - The Mathematics Teacher. 51, 1958, No 4, 285-286.

Evliya Çelebi (No 1167)

1. Evliya Efendi. Narrative of Travels in Europe, Asia and Africa in the Seventeenth Century. Transl. by J. von Hammer. L., 1834-1850.
2. Evliya Çelebi Seyahatnamesi. 1-10. Istanbul, 1314-1357 h. [1897-1938].
3. Kniga puteshestviya. I. Zemli Moldavii i Ukrainy. Per. pod red. A.S.Tveritinovoy. M., 1961. 2. Zemli Severnogo Kavkaza, Povolzh'ya i Podon'ya. Per. pod red. A.D.Zheltyakova. M., 1979.
4. Putopis. Oblomci o jugoslovenskim zemljama. Preveo uvod i komment. napisao Nazim Šabanović. Sarajevo, 1967.
5. Seyahatname. 1-2. Istanbul, 1969.

6. Ksiega podrózy Ewliji Czelebiego (wybór). Tlumaczyli Z.Abrahamowicz, A.Dubin-ski, St.Plaskowicka-Rymkiewicz. Warszawa, 1969.
7. Evlia Chelebis Mogzurobis tzigni, turkulidan targima, komentarebi da gamokvleba daurto Giorgi Puturidzem. Kniga puteshestviya Évliya Chelebi. Per., issledovaniye i komm. G.V. Puturidze. 1-2. Tbilisi, 1977-1978.

Ewald, Heinrich (1803-1875)

1. Verzeichnis der orientalischen Handschriften der Universitats-Bibliothek zu Tübingen. Tübingen, 1839.

Eyvazov, Ferman I.

1. Nasiraddin Tusinin falsafi koryshlarina dair - IAN Azerb. SSR, ser. obshch. nauk. 1965, No 4, 90-99.
2. Mahammad Nasiraddin Tusinin ijtimai-sijasi koryshlarina dair. - IAN Azerb. SSR, ser. istorii, filosofii i prava. 1968, No 4, 80-88.
3. Nasiraddinin Tusinin "Ekhlaqi-Nasiri" asari haggynda. - Elm va hajat. 1968, No 11, 26-27.
4. Obshchestvenno-politicheskiye i eticheskiye vozzreniya Nasiréddina Tusi. ADK (fs). Baku, 1969.
5. Nasiraddin Tusi (falsafi wa ijtimai-sijasi korüshlari). Baky, 1980.

Ezgi, Suphi Zühdü

1. Ameli ve nazari Türk musikisi. 1-3. Istanbul, 1935-1952.

Ezgü, Fuat

1. Pîrî Reis. - IA. 9, 1966, 561-565.

Fadıl, 'Abd al-Haqq

1. Thawra al-Khayyam. al-Qahira, 1951.

Fadıl, Mahmud

1. Fihrist-i nuskhaha-yi khatti-yi kitabkhana-yi Danishkada-yi adabiyat wa 'ulum-i insani-yi Danishgah-i Firdawsi. Mashhad, 1354 s.h. [1976].

Faggedon, J. M.

1. Note au sujet de l'aboujad. - JA. 220, 1932, 139-148.

Fagnan, Edmond (1846-1931)

1. Catalogue général des manuscrits des bibliothèques publiques de France. Départements. 18. Alger. P., 1893.

Fahndrich, Hartmut

1. Abhandlung über die Ansteckung von Qusta ibn Luqa, herausg., übers. und komm. Wiesbaden, 1987.

Fakhry, Majid

1. Ibn Rushd, al-faylasuf al-qurtubi. Beirut, 1960.
2. A History of Islamic Philosophy. L. - N.Y., 1983.

al-Fakhuri, Hanna

1. al-Jahiz. al-Qahira, 1372 h. [1953].

Faktorovich, P. M.

1. Velikiy bukharskiy uchonyy Ibn-Sina (Avitsenna). - Trudy Uzbek. gos. universiteta, nov. ser., 30. Biologiya, 17. Samarkand, 1941.

al-Farabi (No 180)

1. Alpharabii opera omnia quae latina lingua conscripta reperiri potuerunt. Ed. G.Camerarius. Parisii. 1634.
2. Alfarabis philosophische Abhandlungen. Herausg. F.Dieterici. Leiden, 1890.
3. Alfarabis philosophische Abhandlungen. Übers. F.Dieterici. Leiden, 1892.
4. Alfarabis Abhandlung über den Musterstaat. Herausg. F.Dieterici. Leiden, 1895.
5. Alfarabis Abhandlung über den Musterstaat. Übers. F.Dieterici. Leiden, 1900.
6. Ara ahl al-madina al-fadila. al-Qahira, 1324 h. [1906].
7. Masail falsafiyya su'la 'anhi. al-Qahira, 1325 h. [1907].
8. Al-jam' bayna ra'yay al-hakimayn. al-Qahira, 1325 h. [1907].
9. Mabadi al-falsafa al-qadima. al-Qahira, 1329 h. [1911].
10. Rasail al-Farabi. Hyderabad, 1349 h. [1930].

11. Ihsa al-`ulum. Nashara `Uthman Muhammad Amin. al-Qahira. 1350 h. [1931]; 1388 h. [1968].
12. Idées des habitants de la cité virtueuse. Trad. par R.P.Jaussen, Y.Karam, J.Chial. - Textes et traductions d'auteurs orientaux. 9. Le Caire, 1949.
13. Catalogo de ciencias., Ed. A.G.Palencia. Madrid, 1932; Madrid - Granada, 1953.
14. Kommentarii k pervoy i pyatoy knigam Yevklida. Per. M.F.Bokshteyna, vvedeniye i prim. B.A.Rozenfel'da. - Problemy vostokovedeniya. 1959, No 4, 93-104.
15. Sushchestvo voprosov. Kommentarii k "Kategoriyam" Aristotelya. Per. A.V.Saghadeyeva. - "Izbrannyye proizvedeniya" [1], 1961, 165-214.
16. Abunasir al-Farabi. Falsafa (filosofiya) üyrenu üshin qajetti sharttar turaly qaghida (risala). Bilim jane engbek, 1962, No 1, 5-6.
17. The Political Regime - al-Siyasa al-madaniyya Also Known as the Treatise on the Principles of Being. Arabic Text, Ed. with Introduction and Notes by Fauzi M.Najjar. Beyrouth, 1964.
18. Panstwo doskonale. Przelozyl J.Bielawski. Warszawa, 1967.
19. Kitab al-musiqi al-kabir. Tahqiq wa sharh Ghattas `Abd al-Malik Khashaba. Muraja`a wa tahrir Mahmud Ahmad al-Hafni. al-Qahira, 1387 h. [1967].
20. Utterances Employed in Logic - Kitab al-alfaz al-musta`malah fi al-mantiq. Arabic Text. Ed. with Introduction and Notes by Muhsin Mahdi. Beirut, 1968.
21. Kitab al-milla wa nusus ukhra. Haqqaqaha wa qaddama Muhsin Mahdi. Book of Religion and Related Texts. Arabic Text. Ed. with Introduction and Notes by Muhsin Mahdi. Beirut, 1968.
22. Ihsa al-`ulum. Tarjama-yi Husayn Khidiw Jam. Tehran, 1348 s.h. [1969].
23. Abunasyr Farabi. Ghylymdar éntsiklopediyasy. - Bilim jane engbek. 1969, No 5, 14-15, No 11, 22-23.
24. O znachenii slova "razum". Per. A.Kh.Qasymjanova, B.Ya.Osherovich i Ye.D.Kharenko. - Voprosy filosofii. 8, 1970, 136-142.
25. Filosofskiye traktaty. Per. A.S.Ivanova, I.O.Mohammeda, B.Ya.Osherovich i A.V. Saghadeyeva, prim. A.S.Ivanova, A.Kh.Qasymjanova, O.M.Mohammeda, B.Ya.Osherovich i Ye.D.Kharenko. Alma-ata, 1970.
26. Matematicheskiye traktaty. Per. pod red. i s prim. A.Kubesova i B.A.Rozenfel'da. Alma-ata, 1971.
27. Deux ouvrages inédits sur la réthorique. 1. Kitab al-Khataba. 2. Didascalia in rhetoricam Aristotelis ex glos. Alpharabii. Éd. et trad. par J.Langhade et M.Grignaschi. Beyrouth, 1971.
28. Filosofiyalyq traktattar. Awd. Q.Saghyndaqov, M.Janghalin jane M.Ishmuhammedov. Alma-ata, 1973.
29. Sotsial'no-eticheskiye traktaty. Per. pod red. A.Kh.Kasymjanova. Alma-ata, 1973.
30. Stat'ya o vakuume. Per. B.Ya.Osherovich. - Khayrullayev [8], 1973, 91-98.
31. Politika. Per. V.P.Demidchika i A.Sadyqova. - Vostochnaya filologiya. 2. Dushanbe, 1973, 102-178.
32. Traktat o muzyke (otryvok). Kur'yer YuNESKO, 1973, No 6. 32-34; "al-Farabi" [2], 1975, 70-75.
33. Eleumettik-etikalyq traktattar. Awd. Q.Saghyndaqov, M.Janghalin jane M.Ishmuhammedov. Alma-ata, 1975.
34. Logicheskiye traktaty. Per. N.N.Karayeva, B.Ya.Osherovich, A.V.Saghadeyeyva i E.D.Kharenko. Alma-ata, 1975.
35. O razume i nauke. Per. B.Ya.Osherovich i Ye.D.Kharenko. Alma-ata, 1975.
36. Kommentarii k "Al'magestu" Ptolemeya. Per. A.Kubesova i J.ad-Dabbakha. Al-maata, 1975.
37. Traktat o religii. Per. B.K.Tayjanova. - "al-Farabi" [2], 1975, 76-93.
38. Abu Nasr Forobiy. Risolalar. Mas"ul muharrir M.M.Khayrullayev. Toshkent, 1975.
39. *Hamahangi-yi afkar dar faylasuf Aflatun wa Arastu. Harmony between the views of Plato and Aristotle.* Tarjama wa sharh az `Abd al-Muhsin Mishkat al-Dini. Tehran, 1353 s.h. [1974].
40. Kommentarii k"m Almagest na Ptolemey. Sofiya, 1975.
41. Al-Farabi on the Perfect State. With introduction, translation, and commentary by Richard Walzer. Oxford, 1985.
42. La Ciudad ideal. Trad. Manuel Alonso Alonso. Madrid, 1985.
43. Istoriko-filosofskiye traktaty. Per. N.N.Karayeva i K.H.Tajikovoy. Alma-ata, 1985.
44. Falsafa Aristutalis. Nashara Muhsin Mahdi. Beirut, 1406 h. [1986].
45. Yestestvenno-nauchnyye traktaty. Per. A.L.Kaziberdova, B.Ya.Osherovich, A.V. Saghadeyeva i K.H.Tajikovoy. Alma-ata, 1987.

"al-Farabi" (memorial collections)

1. Al-Farabi. Nauchnoye tvorchestvo. Sbornik statey. M., 1975.
2. Vozvrashcheniye Uchitelya. O zhizni i tvorchestve Farabi. Alma-ata, 1975.
3. al-Mawrid. Majalla turathiyya fasliyya, al-Farabi `adad khass. 4, 1975, No 3.

Farajov, Aligulu Sattar oghlu

1. Mahammad Nasiraddinin "Maliyyat barasinda" yazmysh oldugu almi asari haqqynda. O nauchnom traktate Muhammada Nasireddina "O finansakh". - "al-Tusi" [1], 1951, 21-27, 52-58.

2. Nasir-ad-Din Tusi o nalogakh feodal'nogo gosudarstva (XIII v.). - Uch. zap. Azerb. gos. universiteta. ser. ekonom. nauk, 1965, No 2, 3-12.

3. Klassifikatsiya dokhodov i raskhodov feodal'nogo gosudarstva po Nasir-ad-Dinu Tusi (XIII v.). - Uch. zap. Azerb. gos. universiteta, ser. ekonom. nauk. 1965, No 3, 93-99.

al-Farghani (No 67)

1. Alfraganii Elementa Astronomiae. Ex trad. Joanni Hispalensis, Ferrarae, 1493.
2. Alfraganii De motu stellarum. Ex trad. Gerhardi Cremonensis cum notis Regiomontani. Ed. J.Schoner. Norimbergae, 1537.
3. Alfraganii Elementa Astronomiae. Ex trad. J.Christmanni. Francofurti, 1590.
4. Muhammedi Fil. Ketiri Ferganensis, qui vulgo Alfraganus dicitur, Elementa Astronomiae Arabic et Latin. Cum Notis ad res exoticae sive Orientales, quae in eis occurunt, Opera Jacobi Golii. Amstelodami, 1669; re-ed. by Fuat Sezgin, F.M., 1986.
5. Alfragano (al-Fargani). Il "libro dell'aggregazione delle stelle" (Dante Conv. II VI-134) secondo il codice Mediceo-Laurenziano Pl. 29 - cod. 9 contemporanea Dante. Publ. con introduzione e note de R.Campani. Collezione di opuscoli Danteschi inediti o rari, 87-90. Firenze, 1910.
6. Kniga o postroyenii astrolyabii. Per. N.D.Sergeyevoy (1 glava). - "Bashmakova" [1], 1975, 221-225.
7. Astronomicheskiye traktaty (otryvki). Per. I.G.Dobrovol'skogo i N.D.Sergeyevoy. - "Materialy" [2], 1976, 67-74.

al-Farisi (No 674)

1. Kamal al-Din al-Farisi. Kitab tanqih al-manazir dhawi al-absar wa'l-basair. 1-2. Hyderabad, 1347-1348 h. [1928-1929].

Farmer, Henry George

1. Clues for the Arabian Influence on European Musical Theory. - JRAS. 1925, No 1, 61-80; L., 1925; [13] I, 271-290.
2. A History of Arabian Music to the 13th Century. L., 1929.
3. The Influence of al-Farabi's "Ihsa' al-`ulum" (De scientiis) on the Writers on Music in Western Europe. - JRAS. 1932, 561-592.
4. Al-Farabi's Arabic-Latin Writings on Music. Glasgow, 1934; N.Y., 1960; L., 1965, [13] I, 271-290.
5. The Lute Scale of Avicenna. - JRAS. 1937, No 4.
6. Yahya b. `Ali. EI. 4, 1934, 1150-1151.
7. `Abd al-Qadir. - EI. 5, 1938, 4-5.
8. Safi al-Din. - EI. 5, 1938, 191-192.
9. Abdülkadir. - IA. 1, 1940, 83-85.
10. Safiy-ed-Din al-Urmavi al-Bagdadi. - IA. 10, 1966, 63-64.
11. The Sources of Arabian Music. An Annotated Bibliography of Arabic Manuscripts which Deal with the Theory, Practice, and History of Arabian Music from the Eighth to the Seventeenth Century. Edinburgh, 1940; Leiden, 1965.
12. Music. - A History of Muslim Philosophy. 2. Wiesbaden, 1966, 1124-1178; [13] I, 215-269.
13. Studies in Oriental Music. 1-2. Ed. E. Neubauer. F.M., 1986.

Farook, M.

1. Al-Kanun al-Masudi by Alberouni. Transl. and ed. Aligarh, 1929.

Farrukh, Omar A.

1. al-Farabiyan (al-Farabi wa Ibn Sina). Beirut, 1363 h. [1944].
2. `Abqariyya al-`Arab fi'l-`ilm wa'l-falsafa. Dimashq, 1364 h. [1945].
3. Ikhwan al-Safa. The Brethren of Purity and the Comrades of Faithfulness). Beirut, 1364 h. [1945].
4. Ibn Bajja. Avempace and the Philosophy in the Muslem West. Beirut, 1371 h. [1952].
5. Ibn Tufayl. Beirut, 1371 h. [1952].
6. `Abqariyya al-`arab fi'l-`ulum wa'l-falsafa. La génie Arabe dans la science et la philosophie. Beirut, 1371 h. [1952].
7. Athar al-falsafa al-islamiyya fi'l-falsafa al-urubiyya. The Influence of Muslim Philosophy on European Thought. Beirut, 1371 h. [1952].

Farzana Pur, Ghulam Riza and Danish Pazhuh, Muhammad Taqi

1. Fihrist-i kitabkhana-yi Mahmud Farhad Mu`tamid. - NKMDT. 3, 1963, 148-288.

al-Fasi, al-`Adid

1. Khizana al-Karawiyyin wa nawadiruha. - MMMA. 5, 1959, 3-16.

Fathi [Fathiyev], Al'bert

1. N.I.Lobachevskiy isemendage fanni kitaphana kul"yazmalar tasvirlamasi. 12. Tatar adiplara ham ghalimnarzneng kul"yazmalary. 3, Qazan, 1968.

Fathnuri, Farman

1. Abu'l-Rayhan Muhammad ibn Ahmad al-Biruni jai pidaish ka qaziya. - "al-Biruni" [9], 1979, 827-837.

Fayzullayev, Amanulla [Omanulla] Fayzulla ughli

1. Muhammad Khorazmiy. Toshkent, 1965.
2. Abu Rayhon Beruniyning "Qadimli khalqlardan qolgan yodgorliklar" asaridagi ba'zi masalalar haaqida. - al-Biruni [32], 1968, 21-32.
3. Voprosy protivorechivosti dvizheniya v filosofskoy diskussii Beruni i Ibn Siny. - ONU. 1968, No 10, 32-34.
4. Voprosy poznaniya v "Zije" Ulugbeka. - ONU. 1969, No 3, 43-45.
5. Nauchnoye tvorchestvo Muhammada al-Khorezmi. Tash., 1983.
6. Muhammad al-Khorezmiy wa uning ilmiy merosi. Toshkent, 1983.

Fazlıoğlu, Ihsan

1. Ibn el-Havvam (ol. 724/1324) ve Eseri El-Fevaid el-Bahaiyya fi El-Kava`id el-hisabiyye. Tenkitli Metni ve Tarihi Değerlendirme. Diss. Istanbul, 1993.

Fedchina, Vera Nikolayevna (b. 1923)

1. Nekotoryye kartograficheskiye svedeniya o territorii Sredney Azii v trudakh ucho-nykh srednevekovogo Vostoka. - INTSV. I, 1960, 454-466.
2. Kak sozdavalas' karta Sredney Azii. M., 1967.

Federici Vescovini, Graziella (b. 1930)

1. Studi sulla prospettiva medievale. Torino, 1965.
2. Contributo per la storia della fortuna di Alhazen in Italia: il volgarizzamento del Ms. Vat. 4595 e il "Commentario terzo" del Ghiberti. - Rinascimento (2) 5, 1965, 17-49.
3. "Albumasar in Sadan" e Pietro d'Abano. - "Diffusione delle scienze", 1987, 29-35.

Fehérvari, Géza

1. An Eighth/Fourteenth-century Quadrant of the Astrolabist al-Mizzi. - BSOAS. 35, 1972, 115-117.

Ferrand, Gabriel (1864-1935)

1. Relations des voyages et textes géographiques arabes, persanes et turcs, relatifs à l'Extrême-Orient du VIII^e au XVIII^e siècles. 1-2. P., 1913-1914; reéd. avec introduction en français et arabe par Fuat Sezgin. F.M., 1986.
2. Instructions nautiques et routiers arabes et portugais des XV^e au XVI^e siècles, reprod., trad. et annotées. I. Le Pilota des mers de l'Inde, de la Chine et de l'Indonésie par Shihab al- Din Ahmed ibn Mağid. 1-3, P., 1921-1928.
3. Introduction à l'astronomie nautique arabe. P., 1928; re-ed. par Fuat Sezgin. F.M., 1986.
4. Shihab al-Din Ahmad ibn Madjid. - EI. 4, 1934, 389-396.
5. Suleiman al-Mahri. - EI. 4, 1934, 572-578.
6. L'amiral Sidi Ali et le Muhit. Introduction à l'astronomie nautique arabe. P., 1936.
7. Süleyman Mehri. - IA. 11, 1968, 182-190.
8. Şihabeddin Ahmed Macid. - IA. 11, 1968, 519-521.
9. Études sur la géographie arabe-islamique. 1-2. Ed. par Fuat Sezgin. F.M., 1986.

"Fihrist"

1. Fihrist kutub `arabi, farsi wa urdu makhzuna bi-kutubkhana Asafiyya. Haydar-abad, 1332-1333 h. [1914].
2. Fihrist kutub Kapurthala. Lahore, 1921.
3. Fihris al-kutub al-mawjuda bi'l-maktaba al-Azhariyya. 1-7. al-Qahira, 1365-1382 h. [1946-1962].
4. Fihris al-kutub al-`arabiyya al-mawjuda bi-Dar al-kutub al-Misriyya, 1-7. al-Qahira, 1365-1382 h. [1946-1962].
5. Fihrist al-kutub wa'l-makhtutat al-makhfuza fi khizana al-amir Ibrahim Hilmi bi-maktaba al-Jami`a al-Misriyya. al-Qahira, 1933.

6. Fihrist Maktaba Qawala. 1-4. al-Qahira, 1350-1352 h. [1931-1933].
7. Fihrist Kitab 'Arabi. Catalogue of Arabic Books in the Rampur State Library. Rampur, 1902.

Filliozat, J.

1. Al-Biruni et l'alchimie indienne. - "al-Biruni" [4], 1951, 101-105.

Fiorini, Matteo

1. Le proiezioni cartografiche di Alberuni. - Boll. di soc. geograf. italiana. (3), 4, 1891, 287-294; "Mathematical Geography" [7], 1992, 178-185.

Fischer, August

1. Al-Maqdisi und al-Muqaddasi. - ZDMG. 60, 1906, 404-410; "Studies on al-Ya`qubi", 1992, 293-299.

Fleisch, H.

1. Ibn Faris. - EI^2. 3, 1971, 787-788.
2. Ibn Khashshab. - EI^2. 4, 1978, 834-835.

Fleischer, Heinrich Leberecht (1801-1888)

1. Catalogus codicum manuscriptorum orientalium Bibliothecae regiae Dresdensis. Lipsiae, 1831.
2. Katalog der refa'ije (Abteilung der Universitatsbibliothek zu Leipzig). - ZDMG. 8, 1854, 573-584.

Fleischer, H. L. and Delitzsch, F.

1. Catalogus Librorum manuscriptorum qui in Bibliotheca Senatoria civitatis Lipsiensis assrevantur. Codices arabici, persici, turcici. Grimae, 1838.

Flemming, Barbara and Gotz, M.

1. Verzeichnis der orientalischen Handschriften in Deutschland. 13:1, 2. Türkische Handschriften. Wiesbaden, 1968.

Flügel, Gustav (1802-1870).

1. Al-Kindi, genannt der "Philosoph der Araber" (failasūf al-`arab). - Abh. für die Kunde des Morgenlandes. 1, Lpz., 1857, No 2.
2. Über.. die Abhandlungen der aufrichtigen Brüder und treuen Freunde. - ZDMG. 13, 1859, 1-38.
3. Über Muhammed ibn Ishaq's Fihrist al-`ulum. - ZDMG. 13, 1859, 559-650.
4. Die grammatischen Schulen der Araber. 1. Lpz., 1862.
5. Mani, seine Lehre und seine Schriften. Ein Beitrag zur Geschichte des Manichäismus. Aus dem Fihrist des Abu'lfaradsch Muhammed ben Ishaq al-Warraq, bekannt unter dem Namen Ibn Abi Ja`qub an-Nadim, im Text nebst Uebersetzung, Commentar und Index. Lpz., 1862.
6. Die arabischen. persischen und türkischen Handschriften der Kais.-Konigl. Hofbibliothek. 1-3. Wien. 1865-1867.

Forcada Nogues, Miquel

1. Ibn .`Asim (m. 403/1013), Kitab al-anwa' wa'l-azmina - al-qawl fi'l-šuhur (Tratado sobre los anwa y los tiempos - Capitulo sobre los meses), Madrid. 1993.
2. A New Andalucian Historical Source from Fourth/Tenth Century. The Mukhtasar min al-anwa' of Ahmad ibn Faris. - "From Baghdad to Barcelona". II, 1996, 769-780.

Fouchecour, Henri and Rosenfeld, BA.

1.Umar Khayyam. - EI^2, X, 827-834.

Frank, Josef

1. Zur Geschichte des Astrolabs. - SBPMS. 48-49. 1916-1917, 275-305.
2. Die Verwendung des Astrolabs nach al-Khwarizmi. - AGNM. 1922, No 3.

Frank, R. M.

1. The Metaphysics of Created Being according to Abu'l-Hudhayl al-Allaf. A Philosophical Study of the Earliest Kalam. L., 1966.
2. Abu Rashid al-Nisaburi. - EI^2, Suppl., 1982, 31-32.

Frank, Tamar Zahava

1. Al-Kindi's "Book of Definitions", Its Place in Arabic Definition Literature. Ann Arbor, 1985.

Franklin, S. P.

1. Eudoxus, Omar, and Continued Fractions. - Scripta Mathematica. 25, 1960, 353-355.

Freudenthal, Gad

1. Maimonides' Guide of Perplexed and the Transmission of the Mathematical Tracts "On Two Asymptotic Lines" in the Arabic, Latin and Hebrew Medieval Traditions. - Vivarium, 26, 1988, No 2, 113-140.
2. La philosophie de la géométrie d'al-Farabi. Son commentaire sur le début du I^{er} livre et debut du V^{e} livre des Éléments d'Euclide' - Jerusalem Stud. Arab. Islam., 11, 1988, 104-219.

Frick, H.

1. Ghazalis Selbstbiographie, eine Vergleich mit Augustins Konfessionen. Lpz., 1919.

Friedlaender, M.

1. Joseph ben Judsh ibn `Aknin. - JE. 7. N.Y., 1904, 267-268.

Friedrich, R. and Van den Berg, L. W. Ch.

1. Codicum Arabicorum in bibliotheca Societatis artium et scientiarum, quae Bataviae floret, asservatorum catalogus, Batavia - den Haag, 1873.

"From Baghdad to Barcelona"

1. From Baghdad to Barcelona. Studies in the Islamic Exact Sciences in Honour of Prof. Juan Vernet. 1-2. Barcelona, 1996.

"From Deferent to Equant"

1. From Deferent to Equant. A Volume of Studies in the History of Sciences of the Ancient and Medieval Near East in Honor E.S.Kennedy. - Ann. of the New York Acad. of Sciences, 500, 1987.

Fück, Johann

1. Eine arabische Literaturgeschichte aus dem 10. Jahrhundert n. Chr. (Der Fihrist des Ibn an Nadim). - ZDMG. 84, 1930, 111-124.
2. Neue Materialen zum Fihrist. - ZDMG. 90, 1936, 301.
3. Sechs Ergänzungen zu Sachaus Ausgabe von al-Birunis "Chronologie orientalischer Völker". - Documenta islamica inedita. B., 1952, 69-98.
4. Ibn Khalliqan. - EI^2. 3, 1971, 832-833.
5. Ibn an-Nadim. - EI^2. 3, 1971, 876-878.

Furat, A. S.

1. Tirmizi. - IA. 13, 1973, 383-388.
2. Isam al-Din Ahmed b. Muslih al-din Taşköprü-zade, Shaqaiq al-Numaniyya fi Ulama Davlat al-Osmaniyya, ed. by Ahmet Suphi Furat, Istanbul 1985

Furlani, Giuseppe

1. Una Risala di al-Kindi sull'anima. - Rivista trimestrale di studi filosofici e religiosi. 3, 1922, 50-63.
2. La Giulia e la Dalmazia nel "Libro di Ruggero" di al-Idrisi. - Rivista Italiana di Egittologia e di Papirologia. 6, 1925, 54-78; "Studies on al-Idrisi" [3], 1992, 72-84.

al-Fuwati (No 676)

1. Mu`jam al-alqab, haqaqahi al-Mawlawi Muhammad `Abd al-Quddus. Lahur, 1932.
2. Talkhis Majma` al-adab fi Mu`jam al-alqab. Haqaqahi Mustafa Jawad. Dimashq, 1962-1967.

Fysee, A. A. A.

1. A Descriptive List of Arabic, Persian, and Urdu Manuscripts in the Bombay Branch of Royal Asiatic Society, - J. of Bombay Branch of Royal Asiatic Society, 3, 1928, 1-43.

Gabrieli, Francesco

1. `Omar Khayyam. - SeT. 2, 1975, 465-467.

Gabrieli, Giuseppe (d. 1942)

1. La Risala de Questa ben Luqa sulla differenza tra la spirito e l'anima. - Rendiconti della Reale Accad. dei Lincei, classe dei sci. mor. 19, 1910.
2. Nota bibliografica a Qusta ibn Luqa. - Rendiconti della Reale Accad. dei Lincei. Classe dei sci. mor. 21, 1912, 341-382.
3. Avicenna. - Archeion. 4, 1923, 251-270.
4. Averroé. - Archivio di storia dei scienzii. 5, 1924, 156-162.
5. Medici e scienzati Arabi: Hunain ibn Ishaq. - Isis. 6, 1924, No 3, 282-292.
6. Medici e scienzati Arabi: `Ali ibn Ridwan. - Isis. 6, 1924, No 4, 500-506.
7. Medici e scienzati Arabi: Fakhr-al-din al-Razi. - Isis. 7, 1925, No 1, 9-13.

Gafurov, Bobojan Gafur zoda (1908-1977)

1. Abu Reyhan Muhammed ibn Ahmed al'-Biruni. Geniy, kotoryy zhil v Sredney Azii tysyachu let nazad. - Kur'yer YuNECKO, 1974, No 7, 4-8.
2. Abu Nasr al'-Farabi i yego vremya (K 1100-letiyu so dnya rozhdeniya vydayu-shchegosya myslitelya Vostoka). - Vestnik AN SSSR, 1975, No 8, 87-96.

Gafurov, B.G. and Qasymjanov, A.Kh.

1. O sotsial'no-eticheskikh vozzreniyakh al'-Farabi. - al-Farabi [19], XIII-XXXII.
2. Al-Farabi v istorii kul'tury. M., 1975.

Gambaroghlu, K. and Lyatifov, D.

1. Mashhur tebib wa filosof Abu Bakr al-Razi. Znamenityy vrach i filosof Abybekr al-Razi. - Azerbayjanskiy meditsinskiy zhurnal. 1967, No 6, 73-75.

Gamzatov, Gaji [Hamzatov Hajji] Gamzatovich and Shihsaidov, Amri Rizayevich

1. Al-makhtutat al-`arabiyya fi Daghistan. - AJ. 2, 1987, 62-83.

Gandz, Salomon (1884-1954)

1. The Origin of the Gubar Numerals. - Isis, 1931, 393-424.
2. Mishnat ha-middot, the first Hebrew Geometry of about 150 C.E. and the Geometry of Muhammed ibn al-Khowarismi, thr first Arabic Geometry (c. 820), Representation the Arabic Version of the Mishnat ha-middot. - QS(A). 2, 1932.
3. Bemerkungen zum "Buch über die Ausmessung der Ringe" des Ahmad ibn `Omar al-Karabisi. - 2, 1933, 98-105.
4. The Sources of al-Khowarismi's Algebra. - Osiris. 1, 1936, 263-277.
5. The Origin and Development of the Quadratic Equations in Babilonian, Greek and Early Arabic Algebra. - Osiris. 3, 1937, 509-557; 5, 1938, 405-406, 413-414, 445-447, 462-470, 507-508, 534-539, 541-542.
6. The Algebra of Inheritances. A Rehabilitation of al-Khuwarismi. - Osiris. 5, 1938, 319-391.

Gandz, S., Obermann, J., and Neugebauer, O.

1. The Code of Maimonides. Book 3, Treatise 8, Sanctification of the New Moon. New Haven, 1956.

Garbers, Karl

1. Eine Ergänzung zu Sachauschen Ausgabe von al-Biruni's "Chronologie orientalischer Völker". - Der Islam. 30, 1952, No 1, 39-80; Documanta islamica inedita. B., 1952, 45-68.
2. La Matematica y la astronomia en.las edad media islamica. Trad. por G.S.Muellin. Madrid. 1954.

Garcin de Tassy, Joseph Helidore (1794-1878)

1. Histoire de la littérature hindoue et hindoustanie, 2ᵉ éd., I, P., 1870.

Gardet, Louis

1. La Pensée Religieuse d'Avicenne (Ibn Sina). P., 1951.
2. La connaissance mystique chez Ibn Sina et ses présupposés philosophiques. - "Ibn Sina" [4], 2, 1952.
3. al-Djubba`i. - EI^2. 2, 1965, 569-570.
4. Études de philosophie et de mystique comparées. P., 1972.
5. Portraits of Two Savants and Humanists - Biruni and Albert the Great. - "al-Biruni" [9], 1979, 195-203.

Gardner, W. R. W.

1. An Account of al-Ghazali's and Life and Works. Madras, 1919.

Gari, Lutf-Allah T.

1. Al-Khazini and his Book "The Balance of Wisdom". - ISHAS 2, 1979, 72.

Garrett, F. and Guleri, C.

1. The Jaipur Observatory and Its Builder. Allahabad, 1902.

Garro, Ibrahim

1. Al-Kindi and Mathematical Logic. - ISHAS 1, I 1977, 397; II, 1978, 36-40.
2. The Paradox of the Infinite by al-Kindi. - JHAS. 10, 1994, No 1-2, 111-118.

Gatje, Helmut

1. Studien zur Überlieferung der Aristotelischen Psychologie im Islam. Heidelberg, 1971.
2. Zur Lehre von den Voraussetzungsschlüssen bei Avicenna. - ZGAIW. 2. 1985, 140-204.

Gauthier, Léon

1. La philosophie musulmane. Leçon d'ouverture d'un course public sur le roman philosophique d'Ibn Thufayl. P., 1900.

1a. Ibn Thofail, sa vie, ses œuvres. Thse. P., 1909; 1983.

2. La théorie d'Ibn Roschd sur le rapports de la religion et de la philosophie. P., 1909; 1983.

2a. Antécédents greco-arabes de la psycho-physique, avec le traité de posologie d'El-Kindi. Beyrouth, 1938.

3. Ibn Roschd (Averroes). P., 1948.

Gawharin, Sa`id Sadiq

1. .Sharh-i ahwal-i Hujjat al-haqq Abu `Ali-yi Sina. Tehran, 1332 s. h. [1953].

Gelenbevi (No 1390)

1. Adla` muthallathat. Istanbul, 1220 h. [1805].
2. Qibla. Istanbul, 1220 h. [1805].

Genequand, Charles

1. Platonism and Hermetism in al-Kindi's "Fi al-nafs". - ZGAIW. 4, 1987/88, 9-18.

"Genius of Arab Civilization"

1. The Genius of Arab Civilization. Source of Renaissance. Ed. R.Hayes. Ox., 1976 (GAC).

Gencan, T. H. and Dizer, M.

1. Nasir El-Din El-Tusi'nin Muhtasar fi `ilm al-tancim ve ma`rifat al-takvim (Risale-yi Si fasl)'nin Ahmed-i Dai tarafından Türkçe çevirisi. Istanbul, 1984.

"Geography of East Asia"

1-.5. Texts and Studies on Historical Geography and Topography of East Asia. Collection of papers ed. by Fuat Sezgin. F.M., 1993.

"Geography of Egypt"

1-5. Texts and Studies on Historical Geography and Topography of Egypt 1-5. Collection of papers ed. by Fuat Sezgin. F.M., 1992.

Gerbert (Pope Sylvester II) (d. 1003)

1. Gerberti Opera Omnia. Ed. N.Bubnov. B., 1899.

Ghali, Muhammad Mahmud

1. al-Handasa wa Ibn al-Haytham. - "al-Jam`iyya al-Misriyya" [1], 157-159.

Ghani, A. R.

1. Ibn al Haitham. A Bibliographical Note. - "Ibn al-Haytham" [1], 1970, 321-331.

Gharavi, S. Mehdi

1. Two Noteworthy Manuscripts of al-Biruni's al-Tafhim. - Islamic Culture. 49, 1975, 215-219.

al-Ghazzali (No 415)

1. Algazalis Logica et Philosophia. Ed. D.Gundisalvi. Venetiae, 1506.

2. Le Préservatif de l'Erreur et notices sur les extases (des soufis). Trad. par C.Barbier de Meynard. - JA (7). 9, 1877, 5-93.
3. al-Gazzali. Maqasid al-falasifa. I. Die Logik. Herausg. G.Beer. Leiden, 1888.
4. Kimiya al-sa'ada. Tashkand, 1322 h. [1904].
5. Algazel. Tahafut al-Falasifat (L'incoherence des Philosophes). Texte arabe établi par Maurice Bouyges, Beyrouth, 1927.
6. Mishkat al-anwar (The Niche for Lights). Transl. W.T.H.Gairdner. L., 1924.
7. Algazel. Maqaçid al-Falasifat. Texte arabe établi par Maurice Bouyges. Beyrouth, 1935.
8. Ihya 'ulum al-din. 1-4. al-Qahira, 1358 h. [1939].
9. Tahafut al-falasifa. al-Qahira, 1947.
10. al-Munqidh min al-dalal. Nashara 'Abd al-Halim Mahmud. al-Qahira, 1955.
11. Tahafut al-Falasifah. Transl. S.A.Kamali. Lahore, 1958.
12. Al-Munqid min ad-dalal (Erreur et délivrance). Beyrouth, 1959.
12a. Ihya al-'ulum. 1-4. Nashara Mu'assasat al-Halabi. al-Qahira, 1388 h. [1968].
13. al-Maqsad al-asna fi sharh ma'ani asma Allah al-husna. Nashara F.A.Shahadi. Beirut, 1391 h. [1971].
14. Ihya' 'ulum al-din. Voskresheniye nauk o vere. Izbrannyye glavy. Per., issledovaniye, komm. i ukazateli V.V.Naumkina. M., 1980.
15. al-Qustas al-mustaqim. Pravil'nyye vesy. Otdel'nyye glavy. Per. V.V.Naumkina. - al-Ghazzali [10], 1980, 317-318.

Giannakis, Elias

1. Fragments from Alexander's Lost Commentary on Aristotle's "Physics", with the Original Arabic Text and Greek Parallels. - ZGAIW. 10, 1995/96, 157-187.

Gibb, Hamilton Alexander Rosskeen

1. Abu'l-Fida. - EI². 1, 1960, 118-119.

Gibbs, Sharon L., Henderson, Janice A., and Price, Derek de Solla

1. A computerized checklist of astrolabes. New Haven, 1973.

Gildemeister, Johannes (1812-1890)

1. Catalogus librorum manuscriptorum orientalium in Bibliotheca Academiae Bonnensi servatorur. Bonn, 1864-1876; "Handschriften" [2], 1, 1987, 615-665.

Gingerich, Owen (b. 1930)

1. Appendix to E.S.Kennedy "Astronomical Events from a Persian Astrological Manuscript". - Centaurus. 24, 1980, 178-180.
2. Islamic Astronomy. - Scientific American, 1986, No 4, 74-83.
3. Zoomorphic Astrolabes and the Introduction of Arabic Star Names into Europe. - "From Deferent to Equant" [1], 1987, 89-104.

Gingerich, O, King, D., and Saliba, G.

1. The Abd al-A'imma Astrolabe Forgeries. - JHA. 3, 1972, 188-189; King [34], 1987, 75-85.

Ginzel, Friedrich Karl (1850-1926)

1. Handbuch der mathematischen und technischen Chronologie. 1. Lpz., 1906.

Gliozzi, Mario (1899-1987)

1. L'invenzione della camera obscura. - Archeion, 14, 1932, 221-229.

de Goeje, Michael Jan

1. Ğaubari's "entdeckte Geheimnisse". - ZDMG. 20, 1866, 485-510.
2. Notice biographique d'Ibn al-Haitham. - Archives néerlandaises de sciences exactes et naturelles (2). 6, 1901, 668-678.

de Goeje, M.J., Dozy, R.P.A., Yuynball,T.W., de Jong, Paul, and Houtsma,M.T.

1. Catalogus codicorum orientalium Bibliothecae Academiae Lugduno-Bataviae. 1-6, Lugduno-Bataviae, 1851-1877.

Gogol', Nikolay Vasil'yevich (1809-1852)

1. Al-Mamun. - Sobraniye sochineniy, 6. M., 1956, 62-68.

Goha, Farid

1. Al-Farabi, the Scientist. - ISHAS 1, I, 1977, 105-131, II, 1978, 41-42.

Goichon, Anne-Marie

1. Introduction d'Avicenne. P., 1933.
2. La Distinction de l'Essence et l'Existence d'après Ibn Sina. P., 1937.
3. La philosophie d'Avicenne et son influence en Europe médiévale. P., 1944, 1951; 1979.
4. Le récit de Hayy ibn Yaqzan. Commenté par des textes d'Avicenna. P., 1959.
5. Ibn Sina. - EI^2. 3, 1971, 941-947.

Gökbilgin, M. Tayyib

1. Katip Çelebi'nin Kronolojik Eseri Takvimüttevarih. - "Hajji Khalifa" [1], 1957, 102-119.
2. XVII. Asırda Osmanlı Devleti'nde İslahat İhtiyaç ve Temayülleri ve Katip Çelebi. - "Hajji Khalifa" [1], 1957, 197-218.
3. Müneccim Başı. - IA. 8, 1964, 801-806.

Gökmen, Fatin (d. 1955)

1. İbni Sina'nın heyet ve riyaziye cephesi. - "İbn Sina" [1], 1937, No 23, 1-25.
2. Biruni. - IA. 2, 1952, 635-646.
3. Ibnüzzerkale. - IA. 5, 1958, 876-878.

Gökmen, Muzaffer

1. Muratmolla kütüphanesi. Istanbul, 1958.

Gökyay, Orhan Şaik

1. Katip Çelebi. Hayatı - şahsiyeti - eserleri. - "Hajji Khalifa" [1], 1957, 3-90.
2. Katib Çelebi. - IA. 6, 1960, 432-438.
3. Katip Çelebi'den Seçmeler. Istanbul, 1968.
4. Katib Çelebi. - EI^2. 4. 1978, 760-762.

Goldschmidt, Hermann L.

1. Maimonides. - GWG. 3, Zürich, 1973, 460-472.

Goldstein, Bernard R. (b. 1938)

1. A Medieval Table for Reckoning Time from Solar Altitude. - Scripta Mathematica. 27, 1962, No 1, 61-66; "Kennedy" [1], 1983, 293-298.
2. A Treatise on Number Theory from a Tenth Century Arabic Source. - Centaurus. 10, No 3, 1964, 129-160; "Kennedy" [1], 1983, 962-964.
3. The Book of Eclipses of Masha'allah. - Physis, 6. 1964, No 2, 205-213.
4. On the Theory of Trepidation according to Thabit b. Qurra and al-Zarqalla and its Implications for Homocentric Planetary Theory. - Centaurus. 10, 1965, No 4, 232-247.

4a. Evidence for a Supernova of A.D.1006. - The Astronomical Journal. 70, 1965, No 1, 105-114.

5. Some Medieval Reports of Venus and Mercury Transits. - Centaurus, 14, 1969, No 1, 49-59.
6. Ibn `Iraq.- EI^2. 3, 1971, 808.
7. Ibn Yunus. - EI^2. 3, 1971, 969-970.
8. Theory and Observation in Medieval Astronomy. - Isis. 60, 1972, 39-47.
9. Ibn Mu`adh's Treatise on Twilight and the Height of the Atmosphere. - AHES. 17. 1977, No 2, 97-118.
10. Medieval Observations of Solar and Lunar Eclipses. - AIHS. 29, 1979, No 104, 35-52.
11. Theory and Observation in Ancient and Medieval Astronomy. L., 1985.
12. Lunar Velocity in the Middle Ages: A Comparative Study. - "From Baghdad to Barcelona". I, 1996, 181-194.

Goldstein, B. R. and Chabas, J.

1. Ibn Kammad's Star List. - Centaurus. 38, 1996, No 4, 317-334.

Goldstein, B. R. and Sawyer, F. W.

1. Remarks on Ptolemy's Equant Model in Islamic Astronomy. - "Prismata", 1977, 165-181.

Goldstein, B. R. and Swerdlow, Noel

1. Planetary Distances and Sizes in an Anonymous Arabic Treatise preserved in Bodleian Ms. Marsh 621. - Centaurus. 15, 1970, 135-170.

Goldziher, Ignaz (1850-1921)

1. Ueber die Benennung der "Ichwan al-safa". - Der Islam. 1, 1910, 22-26.

Gölpınarlı, Abdülbaki

1. Mevlana müzesi yazmalar kataloğu. 1-3, Ankara, 1967-1972.

Goodman, Lenn E.

1. Avicenna, Arabic Thought, and Culture. L., 1992.

Gordlevskiy, Vtadimir Alaksandrovich (1876-1956)

1. Natsional'naya biblioteka v Stambule, osnovannaya Ali Emiri. - DAN SSSR. 5, 1929, No 10, 181-183.
2. Rukopisnyye biblioteki goroda Brussa. - DAN SSSR, 5, 1929, No 2, 23-26.

Gosche, Richard

1. Ueber Ghazalis Leben und Werke. - Abhandl. der Preuss. Akad. der Wiss., Phil.-hist. Kl., 1859, 239-311.

Gottesberger, J.

1. Barhebraus und seine Scholien zur heiligen Schrift. Freiburg i.B., 1900.

Gottschalk, M. L., Trimingham, J. S., Beeston, A. F. L. and Norwood, D.

1. Catalogue of the Mingana Collection of Manuscripts now in the Possession of the Trustees of the Woodbroocke Settlement, Selly Oak, Birmingham, and Preserved at the Selly Oak Colleges Library. 4. Birmingham, 1963.

Gottwald [Gotval'd], Iosif Fyodorovich (1813-1897)

1. Opisaniye arabskikh rukopisey, prinadlezhavshikh biblioteke imp. Kazanskogo universiteta. Kazan', 1855.

Grant, Edward

1. Physical Sciences in the Middle Ages. N.Y. - L., 1971.
2. A Source Book in Medieval Science. Cambridge, Mass., 1974.

Gratzl, E.

1. Die arabischen Handschriften der Sammlung Glaser in der Königl. Hof- und Staatsbibliothek zu München. Mitteilungen der Vorderasiatischen Gesellschaft. 22, 1917, 194-200; "Handschriften", [2]. 2, 550-558.

Greaves, John (1602-1652)

1. Johanni Gravii astronomia quaedam ex traditione Shah Cholgii Persae. Londini, 1652.

Grenard, F.

1. Baber. P., 1930.

Griffini, E. (1878-1925)

1. Listo dei manoscritti arabi, nuovo fondo della Biblioteca Ambrosiana di Milano. -`Rivista degli studi orientali. 3, 1910, 253-278, 571-594, 901-921; 4, 1911-1912, 87-106, 1021-1048.
2. Ibn Abi Ridjal. - EI. 2, 1927, 356-357.

Grigorian, Ashot Tigranovich (1910-1997) and Rozhanskaya, M. M.

1. Mekhanika na srednevekovom Vostoke. - Istoriya mekhaniki s drevneyshikh vremyon do kontsa XVIII v. Pod red. A.T.Grigoriana i I.B.Pogrebysskogo. M., 1971, 33-43.
2. La mécanique en Orient médiéval. `Ilm al-mikanik fil-sharq halal al-qurun al-wusta. - AH. 4-5, 1978-1979, 35-50, arab. 93-102.
3. La mecanica en el Oriente medieval. - "Estudios sobre historia" [1], 1980, 61-80.
4. Mekhanika i astronomiya na srednevekovom Vostoke. M., 1980.
5. Min ta'rikh al-dirasa al-`Ulum al-`arabiyya fi Rusiya wa'l-Ittihad al-sufyati. Al-`Ilm wa'l-taqaddum al-ijtima`i, Musku, 1981, 46-55.

6. Mechanik im mittelalterischen Orient. - Wissenschaft und Gesellschaft. M., 1989, 248-264.
7. Mechanics in the medieval East.M., 1989, 229-245.

Grigorian, Edik Sarkisovich (1930-1977)

1. O matematike sredevekovogo Azerbayjana. - TNKA XIII (m). 1970, 109-114.
2. Traktat Abul Fazla Tabrizi o dokazatel'stve izvestnogo postulata Evklida. - Nekotoryye voprosy issledovaniya istorii matematiki i mekhaniki v Aserbayjane. Baku, 1971, 5.
3. Teoriya parallel'nykh liniy i infinitezimal'nye metody u matematikov srednevekovogo Azerbayjana. ADK(fm). Baku, 1971.

Grigorian E. S. and Dovlatova L. I.

1. Traktat Kutbeddina Shirazi o dvizhenii kacheniya i ob otnoshenii mezhdu ploskim i krivym. - ACIHS XIII (M., 1971). 3-4, 1974, 106-108.

Grigorian, Sergey Nikolayevich (1920-1974)

1. Velikiye mysliteli Sredney Azii (al-Farabi, al-Biruni, Ibn Sina). M., 1958.
2. Velikiye mysliteli Arabskogo Vostoka (Ibn Bajja, Ibn Tufeyl', Ibn Rushd). M., 1960.
3. Iz istorii filosofii Sredney Azii i Irana VII-XI vv. M., 1960.
4. Gazali. - FE. I, 1960, 316-317.
5. Ibn Bajja. - FE. 2, 1962, 189-190.
6. Srednevekovaya filosofiya Sredney Azii, Irana i Arabskogo Vostoka. ADD (fs). M., 1965; Srednevekovaya filosofiya narodov Blizhnego i Srednego Vostoka. M., 1966.

"Grosse Naturwissenschaftler"

1. Grosse Naturwissenschaftler. Biographisches Lexicon. Herausg. F.Krafft, 2. Aufl. Düsseldorf, 1984.

Grosset-Grange, Henri and Rouqette, Henri

1. Arabic Nautical Science. - EHAS I, 1995, 202-242.

Grünebaum, Gustav Edmund von (1909-1972)

1. Avicennas Risala fi'l-`išq and Courtly Love. - JNES. 11, 1952, 233-238.
2. Studien zum Kulturbild und Selbstverstandnis des Islams. Zürich - Stuttgart, 1969.

Guergour, Youcef [Qirqur, Yusif]

1. Le mathématicien maghrébin du XIV^{e} siècle Ibn Qunfudh al-Qasantini (740-806/ 1339-1406). - "al-Multaqi" [1], 1986, 27-28.
2. Ibn Qunfudh. - ENWC. 1997, 428-429.

Guidi, Ignazio (1844-1935)

1. Catalogo dei codici siriaci, arabi, etiopici, turchi e copti della Biblioteca Vittorio Emmanuele. - "Cataloghi" [1], I, 1878, 5-36.
2. Catalogo dei codici siriaci, arabi, etiopici, turchi e copti della Biblioteca Angelica. - "Cataloghi" [1], I, 1878, 61-73.
3. Catalogo dei codici orientali della Biblioteca Allessandrina. - "Cataloghi" [1], I, 1878, 107-108.

Guidi, M. and Walzer, R.

1. Studi sul Kindi, I. Roma, 1938.

Guillemot, M.

1. De l'arithmétique égyptienne et de l'arithmétique arabo-islamique. - "al-Multaki" [2], 1995, 95-105.

Guillen, F. Robles

1. Catalogo de los manuscriptos arabes existentes en la biblioteca Nacional de Madrid. Madrid, 1889.

Gukovskiy, Matvey Aleksandrovich (1898-1971)

1. Mekhanika Leonardo da Vinchi. M.-Lg., 1947; M. 1958, 1967.

Gulbadan begim (1522-1693), daughter of Babur (No 944)

1. The History of Humayun (Humayun-nama) by Gul-Badan begam (Princess Rose-Body). Translated with Introductio, Notes, Illustrations and Biographical Appendix; and Reproduced in Persian from the only known MS of the British Museum, by Annatte S.Beveridge. L., 1902.
2. Gulbadan begim (Zahiriddin Bobirning kizi). Humoyunnoma (Zahiriddin Bobirning ugli - Humoyun podshohning ahvoli). Uzbek tiliga tarjima qiluvchi Sabohat Azimjonova. Gul-badan bint-i Babur Padshah. Humayun-nama. Toshkent - Tashkent, 1959.

Gulchin Ma`ani, Ahmad

1. Fihrist-i kutub-i khatti-yi kitabkhana-yi Astan-i quds-i Rizawi. 8. [Tehran], 1350 s.h. [1971].

Gulyamov [Gulomov], Yah'ya Gulom ughli (1908-1977)

1. Biruni ob istoricheskoy gidrografii nizov'yev Amu-Dar'i.- "al-Biruni" [2], 1950, 85-92.
2. Beruniy Amudaryo oqimining tarihiy gidrografiyasi haqida. - "al-Biruni" [3], 1950, 70-76.

Günaltay, Şemseddin

1. Farabi'nin şahsiyeti, ve tesirleri. - AÜDED. 8, 1951, No 4, 423-436.

Günergun, Feza

1. History of Sciences in Turkey: an Overview of Institutions and Their Activities. - SHSM. 12, 1993, No 1-2, 103-130.

Gunther, Robert Theodore (1869-1940)

1. Chaucer and Messahalla on the Astrolabe Now Printed in Full for the First Time with the Original Illustrations. Ox., 1929.
2. The Astrolabes of the World. 1-2. Ox., 1932.

Guraba, Mahmud

1. al-Ash`ari. al-Qahira, 1953.

Gurova, Antonina Karpovna (1923-1988)

1. Ucheniye Ibn al-Haysama o rasprostranenii sveta i mekhanizme zreniya. - TNKA XIII (f). 1973, 94-99.
2. Prototip printsipa Gyuygensa u Ibn al-Haysama. - VIYT. 1974, No I(46), 45-46.

Guseynov [Huseynov], Geydar [Heydar] Najaf oghlu (1908-1950)

1. Azerbayjanskiy uchonyy XI veka Abul'Gasan Bahmanyar. - DAN Azerb. SSR. 3, 1947, No 5, 231-234.
2. Stat'i po istorii razvitiya filosofii i obshchestvennykh nauk v Azerbayjane. Baku, 1948.

Guseynov [Huseynov], R. A.

1. "Kniga zanimatel'nykh istoriy" Bar Ebreya kak istoricheskiy pamyatnik. - Vsesoyuznaya konf. po problemam arabskoy kul'tury pamyati akad. I.Yu.Krachkovskogo. Tezisy dokladov. M., 1983, 8-9.

Gvaramia, R., Mamulia, L., and Kanchaveli, N.

1. K.Kekelidzis sakhelobis Khelnatserta institutis arabul khelnatserta katalogi (L kolektsiis - I nakveti). Katalog arabskikh rukopisey Instituta rukopisey (kollektsiya L - vyp. I). Tbilisi, 1968.

Haarbrücker, Theodor (d. 1880)

1. Muhammed ibn Ibrâhîm el-Ansârî, arabische Enzyklopädie der Wissenschaften vornehmlich in pädagogischer Hinsicht. - Jahresbericht über die Luisenstädtische Realschule zu Berlin, 1859.

Haas, M.

1. Al-Farabi. - LM. 4, 1988, 284-265.

al-Habashi, A.M.

1. Al-Makhtutat al-`arabiyya fi maktaba al-`allama Muhammad ibn Muhammad ibn Isma`il al-Mansur fi San`a'. - MMMA. 24, 1978, 25-40.

al-Habbal, Muhammad

1. Barnamaj al-Maktaba al-Khalidiyya al-`Umumiyya. al-Quds, 1318 h. [1900].

Habib, Kamil Muhammad

1. The "Kitab al-Saydanah": Structure and Approach. - "al-Biruni" [9], 1979, 458-473.

Habibullah, A. B. M.

1. Descriptive Catalogue of the Persian, Urdu and Arabic Manuscripts in the Dhaka University Library. 1. Dhaka, 1966.

Hackel, Joseph

1. Mizrahi, Elijah - EJ. 12, 1974, 182-183.

Haddad, F. I. and Kennedy, E. S.

1. Geographical Tables of Medieval Islam. - Al-Abhath. 24, 1974, No 1-4, 87-102; "Kennedy" [1], 1983, 636-651.

Haddad, F. I., Pingree, D, and Kennedy, E. S.

1. Al-Biruni's Treatise on Astrological Lots. - ZGAIW. 1, 1984, 9-54.

Hadfi, Hamida

1. "Les problèmes auxquels il n'est pas possible d'apporter une réponse" d'après le livre "al-Fawaid al-Baha'iya" d'Ibn al-Khawwam (643-724 H./1245-1324). - "al-Multaqi" [1], 1986, 29-30.
2. Mafrudat li-Thabit ibn Qurra. - "al-Multaqi" [2], 1995, 197-198, A163-A164.

Hadi, Nabi

1. Jawahir al-`ulum-i Humayuni. - SHMS. 9, 1985, No 1-2, 47-55.

Hadj-Sadok M.

1. Ibn Khordhadbeh. - EI^2. 3, 1971, 839-840.
2. Ibn Kunfudh. - EI^2. 3, 1971, 843-844.

Haeri, Abdol Hossein

1. A Catalogue of the Manuscripts in the Parliament Library (Persian and Arabic). 7, 9-10, 13, 17, 19. Tehran, 1346-1350 s.h. [1967-1971].

Hafner, P.

1. Ueber sogenannte Alhazensche Problem. - Atti di Fondazione "Giorgio Ronchi", contrib. Istituto naz. ottico. 24, 1909, No 5, 190-197.

Haig, T. W.

1. Mahmud I Khaldji. - EI. 3, 1936, 141-142.
2. Mahmud I. - IA. 6, 1960, 156-157.

Hajji Khalifa (No 1145)

1. Tuhfa al-kibar fi asfar al-bihar. Qustantiniyya, 1141 h. [1729]; Istanbul, 1329 h. [1911].
2. Kitab Jihan-numa li-Katib Chalabi. Qustantiniyya, 1145 h. [1732].
3. Taqwim-i tawarikh li-Katib Chalabi. Qustantiniyya, 1146 h. [1733].
4. Katib Tjelebi. Gihan Numa, Geographia Orientalis. Ex turc. in lat. vertit a Matth. Norberg. Londini, 1818.
5. Kashf al-zunun `an isama al-kutub wa'l-funun. Lexicon bibliographicum et encyclopaedicum a Mustafa ben Abdallah Katib Jelebi dicto et nomine Haji Khalfa celebrato compo-situm. Ad codicem Vindobonensium, Parisiensium et Berolinensis fidem primum edidit latine vertit et commentaria indicibusque instruxit Gustavus Fluegel. 1-7. Lpz.-L., 1835-1858 (KZ).
6. Mizan al-haqq fi ikhtiyar al-ahaqq. Istanbul, 1281 h. [1864], 1286 h. [1869], 1306 h. [1889].
7. Kitab Kashf al-zunun `an isama al-kutub wa'l-funun. Qustantiniyya, 1310 h. [1892]; al-Qahira, 1311 h. [1894]; Istanbul, 1329 h. [1911].
8. Kâtip Çelebî. Kaşf az-zunun. Şerefettin Yaltkaya ile Kilisli Rıfat Bilge tarafindan hazırlanmıştır. 1-2. Istanbul, 1941-1943.
9. The Balance of Truth. Transl. by G.L.Lewis. L., 1956.
10. Ilham-al-Mukaddes min-al Feyz-al Akdes. Risâlesinin yeni Türkçe metni ve Süleymaniye Küt. Hamidiye 993/2 numarade kayıtlı nüshasından yapılan tıpkı basım. - "Hajji Kha-lifa" [1], 1957, 165-176.

"Hajji Khalifa" (memorial collection)

1. Kâtip Çelebî. Hayatı ve eserleri hakkında incelemeler. - TTKY. (7), 33, 1957.

Hakk, A., Ethe, H., and Robertson, E.R.

1. Descriptive Catalogue of the Arabic and Persian Manuscripts in Edinburgh University Library. Edinburgh, 1925.

Hall, Robert E.

1. Al-Khâzinî. - DSB. 7, 1973, 335-351.
2. A Decisive Example of the Influence of Psychological Doctrines in Islamic Science and Culture: Some Relationships between Ibn Sina's Psychology, Other Branches of This Thought, and Islamic Teachings. Rubirt Hull. Muthal hasim `ala ta'thir mabahith `ilm al-nafs fi'l-`ulum al-hadara al-islamiyya: ba`d al-`ilaqat ma bayna `ilm al-nafs `inda Ibn Sina wa furu` ukhra li fikrihi wa'l-ta`lim al-islamiyya. - JHAS. 3, 1979, No 1, 46-84, 120-123.

al-Halu, `Abdu

1. Ibn Rushd, al-faylasuf al-Maghribi. Beirut, 1960.

Hamadanizadeh, Javad

1. A Medieval Interpolation Schema for Oblique Ascentions. - Centaurus. 9, 1963, 257-267; "Kennedy" [1], 1983, 526-534.
2. Biruni on Sun's Altitude and Shadows Lengths. - Arya-Mehr University Publications Bureau. 1. Tehran, 1973.
3. Medieval Interpolation Theory. Dissertation. N.Y., 1976.
4. Interpolation Schemes in Dustür al-Munajjimin. - Centaurus. 22, 1978, 44-52.
5. The Interpolation Formulae of Islamic Mathematicians. Sigh al-tawalib al-dakhili fi `ilm al-riyadiyat al-islami. - ISHAS 2, 1979, 58, Suppl. 29.
6. The Trigonometrical Tables of al-Kashi in His Zij-i Khaqani. - HM. 7, 1980, No 1, 38-45.
7. A Survey of Medieval Islamic Interpolation Schemes. - "From Deferent to Equant" [1], 1987, 143-152.

Hamarneh, Saleh K.

1. Notes of al-Biruni's Views of al-Razi's Works. - "al-Biruni" [9], 1979, 474-478.

Hamarneh, Sami Khalaf

1. Al-Kindi, a Ninth-Century Physician, Philosopher, and Scholar. - Medical History. 9, 1965, 328-342.
2. Index of Arabic Manuscripts in the Zahiriyah Library. Damascus, 1968-1969.

2a. Muqaddima Kitab al-Jamahir fi ma`rifa al-jawahir li'l-Biruni. - al-Biruni [35], 1973.

3. The Life Sciences. - GAC. 1976, 145-163.
4. Abu Zayd Hunayn bin Ishaq al-`Ibadi. - GAC. 1976, 164-165.
5. Abu Bakr Muhammad bin Zakariya ar-Razi (Rhazes). - GAC. 1976, 166-167.
6. Abu `Ali al-Husayn bin `Abdallah bin Sina (Avicenna). - GAC. 1976, 168-169.
7. Introduction to al-Biruni's al-Jamahir on Gems and Minerals. - ISHAS 2, 1979, 105.
8. Al-Biruni, the Father of Arabic Pharmacy and Marine Biology as Demonstrated in al-Saydanah. - "al-Biruni" [9], 1979, 479-500.
9. Ibn al-Quff (al-Karaki). - ENWC. 1997, 411.
10. Innovated Techniques in Ibn al-Quff al-Karaki's Surgical Manual al-`Umdah. -ACIHS XX, 1997, 53.

al-Hamdani (No 173)

1. al-Maqala al-`ashira min Sarair al hikma. San`a. Undated.

Hammer-Purgstall, Joseph von (1774-1856)

1. Codices Arabices, Persicos, Turcicos Bibliothecae Caesereo-Regio Palatinae Vindobonensis. Vindobonae, 1820.
2. Catalogo dei codici arabi, persici e turchi della Biblioteca Ambrosiana. - Biblioteca Italiana, 94, Milano, 1839.
3. Literatur der arabischen und persischen Musik. Wien, 1839.

Hammond, Robert

1. The Philosophy of Alfarabi and Its Influence on Medieval Thought. N.Y., 1974; Ann Arbor, 1983.

"Handschriften"

1. Beiträge zur Erschließung der arabischen Handschriften in Istanbul und Anatolien. 1-3. F.M., 1976.
2. Beiträge zur Erschließung der arabischen Handschriften in deutschen Bibliotheken. 1-3. F.M., 1987.

Hankel, Hermann (1839-1873)

1. Zur Geschichte der Mathematik im Altertum und Mittelalter. Lpz., 1874.

Haq, Nomanul S.

1. Jabir ibn Hayyan. - ENWC. 1997, 459-460.

Haqqi, Isma'il [al-Izmiri]

1. Faylasuf al-'arab Ya'qub ibn Ishaq al-Kindi. Tarjama min al-turkiyya 'Abbas al-Azzawi. Baghdad, 1383 h. [1963].

Harley, H. B. and Woodward, David

1. History of Cartography. 2:1. Cartography in the Traditional Islamic and South Asian Societies. Chicago, 1992.

Harrison, J. B., Hardy, P., and Köprülü, M. F.

1. Babur. - EI². 1, 1960, 847-850.

Hartmann, A. Th.

1. Catalogus bibliothecae Olai Gerhardi Tychsen quo continentur libri tam types expressi quam manuscripti. Rostock, 1817; "Handschriften" [2], 3, 1987, 1-18.

Hartmann, Martin

1. Die arabischen Handschriften der Sammlung Martin Hartmann. Halle a/S, 1906; "Handschriften" [2], 1, 1987, 221-250.
2. Die arabisch-islamischen Handschriften der Universitätsbibliothek zu Leipzig und der Sammlungen Hartmann und Haupt. - Zeitschr. für Assyrologie. 23, 1909, 225-266; "Handsch-riften" [2], 3, 1987, 545-576.

Hartner, Willy (1905-1981)

1. Habash al-Hasib al-Marwazi. - EI. 3, 1936, 8-9.
2. Zaman. Time and Chronology (Ta'rikh). - EI. 4, 1934, 1307-1310; [12], 260-263.
3. The Pseudoplanetary Nodes of the Moon's Orbit in Hindu and Islamic Iconographies. - Ars Islamica. 5:2. Ann Arbor, 1938, 112-154; [12], 349-404.
4. The Principle and Use of the Astrolabe. - A Survey of Persian Art. 3. Ox.-L.-N.Y., 1939, 2530-2554; [12], 287-311.
5. The Astronomical Instruments of Cha-ma-lu-ting, Their Identification and Their Relations to the Instruments of the Observatory of Maragha. - Isis. 41, 1950, 184-195; [12], 215-226.
6. Le problème de la planète Kaid. P., 1955; [12], 268-286.
7. Abu Kamil. - EI². 1, 1960, 132-133.
8. Asturlab. - EI². 1, 1960, 722-728; [12], 312-318.
9. Tycho Brahe et Albumasar. - La science au seizième siècle. P., 1960, 137-146; [12], 496-505.
10. Medieval Views on Cosmic Dimensions and Ptolemy's Kitab al-Manshurat. - Melanges Alexandre Koyre. 1. L'Aventure de la science. P., 1964, 254-282; [12], 319-348.
11. Notes on Picatrix. - Isis. 56, 1965, 438-451; [12], 415-428.
12. Oriens-Occidens. I. Festschrift zum 60. Geburtstag von W.Hartner. Herausg. von G.Kernstein, F.Klemm, W.Ruegg, M.Schramm. Hildesheim, 1968.
13. Al-Battani. DSB. 1, 1969, 507-516; [27], 201-210.
14. al-Djabr wa'l-muqabala. - EI². 4, 1978, 110-111.
15. Habash al-Hasib al-Marwazi. - EI². 3, 1971, 1-8.
16. Nasir al-Din al-Tusi's Lunar theory. - Physis. 11. 1969, 287-304; [27], 166-183.
17. La science dans le monde de l'Islam après la chute du Califat. - Studia Islamica. 31, 1970, 135-151; [27], 184-200.
18. Trepidation and Planetary Theories. Common Features in Late Islamic and Early Renaissance Astronomy. - Convegno internazionale "Oriente e Occidente nel medioevo. Filo-sofia e scienze" (Roma-Firenze, 1969). Roma, 1971, 609-629; [27], 267-287.
19. Fautes et contresens dans les traductions arabo-latines médiévales: l'Introductorium in astronomiam d'Abou Ma'shar de Balkh. - ACIHS XII (Paris, 1968). 1B, Discours et conférences, colloques. P., 1971, 94-97.

19a. al-Djabr wa'l-mukabala. - EI². 3, 1971, 110-111.
20. Ptolemy, Azarquiel, Ibn al-Shatir, and Copernicus on Mercury. A Study of Parameters. - AIHS. 24, 1974, 5-25; [27], 292-312.
21. The Islamic astronomical background of Nicolaus Copernicus. - Studia Copernicana Ossolineum. 1975. 7-11; [27], 316-320.
22. Astronomy from Antiquity to Copernicus. - Centre Internat. de Synthese, 1975, 11-17; [27], 326-331.
23. The Rôle of Observations in Ancient and Madieval Astronomy. - JHA. 8, 1977, 1-11; [27], 339-349.
24. An Unusual Value for the Length of the Meridian Degree: 66½ Miles, in the Ibn Yunus' Hakimitic Zij. - Centaurus. 24, 1980, 148-152; [27], 246-250.
25. Ptolemy and Ibn Yunus on Solar Parallax. - AIHS. 30, 1980, No 105, 5-26; [27], 376-397.
26. Al-Battani. - LM. 1, 1980, 1551.
27. Oriens-Occidens. II. Herausg. von Y. Maeyama. Hildesheim - Zürich - N.Y., 1884.

Hartner, W. and Schramm, M.

1. Al-djabr wa'l-mukabala. - EI². 2, 1965, 360-362.
2. Al-Biruni and the Theory of Solar Apogee: an Example of Originality of Arabic Science. - "Scientific Change", ed. A.C.Crombie. L., 1963, 206-218.

Harvey, Ruth E.

1. Qusta ibn Luqa al-Ba`labakki. - DSB. 11, 1975, 244-246.
2. Ibn Ţufayl. - ENWC. 1997, 437-438.
3. Qusta ibn Luqa. - ENWC. 1997, 841-842.
4. Samu`il ibn `Abbas al-Maghribi. - ENWC. 1997, 882.

al-Hasan [al-Hassan], Ahmad Yusuf (b. 1925)

1. Madkhal ila ta'rikh al-tiknulujiya al-`arabiyya. Foreword to the History of Arab Technology. - AH. 1, 1975, 8-29, arab. 3-4.
2. Alat raf` al-ma `inda al-`arab. Arabic Water-Lifting Machines. - AH. 2, 1976, 31-55, arab. 10-11.
3. Taqi al-Din wa'l-handasa al-mikanikiyya al-`arabiyya ma` Kitab al-turuk al-saniyya fi'l-alat al-ruhaniyya min al-qurun al-sadis `ashar. Halab, 1976; JHAS. 1, 1977, No 1, 130-165.
4. The Arabic Text of al-Jazari's al-Jami` bayna al-`ilm wa'l-`amal al-nafi` fi sana`a al-hiyal. "A Compendium on the Theory and Practice of the Mechanical Arts". - JHAS. 1, 1977, No 1, 47-64.
5. Al-Jami` bayna al-`ilm wa'l-`amal al-nafi` fi sana`a al-hiyal li Badi` al-Zaman Abu'l-`Izz al-Razzaq al-Jazari. - JHAS. 1, 1977, No 1, 130-165.
6. Iron and Steel Technology in Medieval Arabic Sources. - JHAS. 2, 1978, No 1, 31-52.
7. Some Obstacles Hindering the Arabic Science and Technology in the Arab Countries. Awail masira al-`ilm wa'l-tiknulujiya - AH. 4-5, 1978-1979, 7-18, arab. 9-30.
8. Islam et la science. P. 1982.

al-Hasan [Hassan], Y. and Hill, D.

1. Islamic Technology. An Illustrated History. Cambridge - P., 1986.

Hasanov, Hamidulla Hasan ughli

1. Mahmud Kashgarskiy (zhizn' i geograficheskoye naslediye). Tash., 1953.
2. Zahiriddin Bobir sayyoh va olim. Toshkent, 1960.
3. Qadimgi uzbek geograflari. Toshkent, 1961.
4. Abu Rayhon Beruniy va Amerika qit'asining topilishi. - Sharq Yulduzi, 1961, No 12, 154-155.
5. Tri karty, imeyushchiye otnosheniye k Biruni. - Izv. Uzb. filiala Geograf. obshchestva SSSR. 5, 1961, 150-151.
6. O "Meteorologii i klimatologii" Biruni. - Trudy Tashkent. gos. universiteta. 193. Geografiya. 1962, 11-14.
7. Voprosy geograficheskogo rayonirovaniya Zemli v trudakh Abu Rayhana Biruni. - Izv. Uzb. filiala Geograf. obshchestva SSSR. 7, 1963, 107-111.
8. Karta mira iz knigi Biruni "At-tafhim". - ONU. 1963, No 8, 59-60.
9. Urta Osiyolik geograf wa sayyohlar. Toshkent, 1964.
10. Sayyoh olimlar. Toshkent, 1981.

Hasanov, H. H. and Buriyev, A.

1. Al-Khorazmiy geografiyasi. Toshkent, 1983.
2. Srednyaya Aziya v "Geografii" al-Khorezmi i trudakh yego posledovateley. - "al-Khwarizmi" [4], 1985, 196-201.

Haschmi, Mohammed Yahia (1904-1979)

1. Al-Kindi, the Philosopher of the Arabs and Great Natural Scholar. - ISHAS 1. I, 1977, 451-458; II, 1978, 43; Hamdard. 21, 1978, No 1-6, 91-94.
2. al-Kindi as physician. Al-Kindi ka tabib. - ISHAS 2, 1979, 15, Suppl. 88-89.

al-Hashimi (No 306)

1. The Book of the Reasons behind Astronomical Tables (Kitab fi 'ilal al-zijat). A Facsimile Reproduction of the Unique Arabic Text Contained in the Bodleian Ms. Arch. Seld. A11 with a Transl. by Fuad I.Haddad and E.S.Kennedy and Comm. by D.Pingree and E.S.Kennedy. Beirut, 1974; N.Y., 1981.

Hashtrudi, Muhsin

1. Risala-yi shafiyya Khwaja Nasir Tusi ya waraqi az ta'rikh-i handasa. - "al-Tusi" [2], 1957, 133-136.

Hasnawi, Ahmad

1. La définition du mouvement dans la Physique du Sifā' d'Avicenne.- ASP, 11, 2001, No 2, 219-255.

Hauber, A.

1. Zur Verbreitung des Astronomen Sufi. - Der Islam. 8, 1918, 48-54.

Hauser, F.

1. Über das Kitab al-hijal, das Werk über die sinnreichen Anordnungen, der Benu Musa. - AGNM. 1, 1922.

Havi, Sami S.

1. Islamic Naturalism and Mysticism: a Philosophic Study of Ibn Tufayl's Hayy ibn Yaqzân. Leiden, 1974.

Hayoun, Maurice-Ruben

1. Maimonide. P., 1987.

Hazai G.

1. al-Kashghari. - EI[2]. 4, 1978, 699-701.

Hazin (No 1339)

1. The Life of Sheikh Mohammed Ali Hazin. Transl. by F.C.Belfour. L., 1830.
2. The Life of Sheikh Mohammed Ali Hazin. Ed. by F.C.Belfour. L., 1831.
3. The Translation of Tarikh-i-ahwal of Mowlana Mohammad Shaykh `Ali Hazin, with an Introduction and Appendix by M.C.Master. Bombay, 1911.

Heath, Thomas Little (1861-1940)

1. Thirteen books of Euclid's Elements. Translated from the Text of Heiberg, with Introduction and Comm. 1-3. Cambridge, 1926.

Heeg, J.

1. Catalogus Codicorum Astrologorum Graecorum. 5. Codices Romanorum. No 3, Bruxellis, 1910.

Heer, N. L.

1. Some Biographical and Bibliographical Notes on al-Hakim al-Tirmidhi. - The World of Islam. Studies in Honor of Philip K. Hitti. L., 1959, 121-134.

Hefni, Mahmoud

1. Ibn Sina's Musiklehre, hauptsächlich an seinem "Najat" erläutert. B., 1931.

Heiberg, Johan Ludwig (1854-1928) and Wiedemann, E.

1. Ibn al Haitams Schrift über parabolische Hohlspiegel. - BM (3). 10, 1909-1910, 201-237; Wiedemann [208], 1, 1984, 369-405.

Heinen, Anton M.

1. Al-Biruni and Ibn al-Haytham: A Comparative Study of Scientific Method. - SHM. 1, 1977, No 4, 285-297; "al-Biruni" [9], 1979, 501-513..
2. On Some Hitherto Unknown Manuscripts of Works by Ibn al-Haytham. - ISHAS 2, 1979, 59.

3. Ibn al-Haitams - Autobiographie in einer Handschrift aus dem Jahr 556 H./1161 A.D. - Die islamische Welt zwischen Mittelalter und Neuzeit. Festschrift für Hans Robert Roemer zum 65. Geburtstag. Beiruter Texte und Studien. 22, 1979, 254-277.
4. An Unknown Treatise by Sanad ibn `Ali on the Relative Magnitudes of the Sun, Earth and Moon. - "From Deferent to Equant" [11], 1987, 167-174.
5. Al-Suyuti. - ENWC. 1997, 928.

Heinz, Wilhelm

1. Verzeichnis der Orientalischen Handschriften in Deutschland. 14:1. Persische Handschriften. Wiesbaden. 1968.

Hell, J. and Wiedemann, E.

1. Geographisches aus dem Mas'udischen Kanon von al-Beruni. - Beiträge zur Geschichte der Naturwissenschaften XXIX. SBPMS. 44, 1912, 119-125; Wiedemann [207], 1970, I, 822-828.

Hermelink, Heinrich (1920-1978)

1. Die ältesten magischen Quadraten höherer Ordnung und ihre Bildungsweise. - SA. 42, 1958, 199-217.
2. Arabische magische Quadraten mit 25 Zeilen. - SA. 43, 1959, 351-354.
3. Bestimmung der Himmelsrichtungen aus einzigen Schattenbeobachtung nach al-Biruni. - SA. 44, 1960, 329-332.
4. Datierung des liber introductorius von Albumaser (Kitab al-mudhal al-kabir von Abu Ma`šar). - SA. 46, 1962, 264-265.
5. Tabulae Jahen. - AHES. - 2, 1964, 108-112..
6. Zur Geschichte des Satzes von der Lotsumme im Dreieck. - SA. 48, 1964, 240-243.
7. Ibn al-Haytam (Alhazen). GWG. 3. Zürich, 1973, 158-170.
8. The Earliest Reckoning Books Existing in Persian Language. - ACIHS XIV (Tokyo, 1974). 3, 1975, 291-294; HM. 2, 1975, 299-303.
9. Zur Bestimmung von Birunis Todestag. - SA. 61, No 3, 1977, 298-300.
10. Arabic Recreational Mathematics as a Mirror of Age-old Cultural Relations between Eastern and Western Civilizations. - ISHAS 1. I, 1977, 459; II, 44-52.
11. Arabische Unterhaltungsmathematik als Spiegel jahrtausendalter Kulturbeziehungen zwischen Ost und West. - Janus. 65, 1978, 105-117.

Hero (1st c. A.D.)

1. Heron d'Alexandrie. Les Mécaniques ou l'Elévateur des corps lourds. Texte arabe de Qusta ibn Luqa, établi et trad. par B.Carra de Vaux. JA (9), 1894, 1, 385-472; 2, 152-269, 420-514. Ré-ed. avec Introduction par D.R.Hill et commentaires par A.D.Drachmann. P., 1988.
2. Heronis Alexandrini Opera quae supersunt omnia. 2, ed. L.Nix et W.Schmidt, Lipsiae, 1901.

Hevelius, Josephus (1611-1687)

1. Prodromus astronomiae. Gedani, 1690.
2. Atlas zvyozdnogo neba. Red. i stat'ya V.P.Shcheglova. Tash., 1968, 1970, 1978, 1981.

Hibbi, Yusuf

1. Hunayn ibn Ishaq. Baghdad, 1394 h. [1974].

Hibshi, `Abdallah Muhammad

1. Masadir al-fikr al-`arabi al-islami fi Yaman. Beirut, 1979.

Hidayat, M. Husain

1. Catalogue of the Arabic Manuscripts in the Buhar Library. - Catalogue Raisonne of the Buhar Library. 2. Calcutta, 1923.
2. Hazin. - EI. 2, 1927, 316.

Hidayat, M. Husain, Mahfuz-ul-Haq, M., and Ishaque, M.

1. Catalogue of Arabic Manuscripts in the Collection of the Royal Asiatic Society of Bengal. Calcutta, 1951.

Hidayat, M. Husain and Masse, H.

1. Hazin. - EI^2. 3, 1971, 338.

Hijab, Muhammad `Ali

1. Al-tharwa al-`ilmiyya li-Ibn al-Haytham. - "al-Jam`iyya al-Misriyya" [1], 1939, 136-138.
2. Qaima bi'l-mawjud min kutub Ibn al-Haytham wa makan bujudihi. - "al-Jam`iyya al-Misriyya" [1], 1939, 139-143.

Hikmat, A. A.

1. Jami. Tehran, 1310 h. [1941].

Hikmatullayev, Hamidulla

1. Traktat Abu Ali ibn Siny "O serdechnykh lekarstvakh". ADK (fl). Tash., 1964.
2. Ibn Sinaning "Yurak dorilari" risolasi. Toshkent, 1966.
3. Roziy va Beruniy. - "al-Biruni" [8], 1973, 198-205.
4. Beruniy Roziyning hayoti wa tibbiy asarlari haqida. - ONU. 1973, No 7-8, 71-79.
5. Abu Ali ibn Sinodan keyin turkiy tillarda yozilgan tibbi asarlar haqida. - "Ibn Sina" [9], 1980, 33-49.
6. Hamidallah Hikmatallayif. Hawl tanqihat "al-Qanun fi'l-tibb" `an tariq ma qama bihi `ulama' al-sharq fi'l-qurun al-lahiqa min sharhwa intisar. - AJ. 3, 1989, 119-126.

Hikmatullayev, H.H. and Karimova S.U.

1. Rukopisi meditsinskikh sochinemiy uchonykh Sredney Azii, Irana i Khorasana (iz fonda IV AN Uz. SSR). - "Materialy" [3], 1991, 251-301.

Hikmatullayev, H. and Shoislomov, Sh.

1. Yoqut Hamawiy (hayoti, ijodi wa sayohati). Toshkent, 1965.

al-Hilali, Taqi al-Din

1. Die Einleitung zu al-Birunis Steinbuch. Lpz., 1941.

Hill, Donald Routledge (1922-1994)

1. Introduction. - al-Jazari [1], 1974, 1-12.
2. Mechanical Technology. - GAC. [1], 1976, 175-187.
3. A Treatise on Machines by Ibn Mu`adh Abu `Abd Allah al-Jayyani. - JHAS. I, 1, 1977, 33-46.
4. al-Jazari. - DSB. 15, 1978, 253-255.
5. Medieval Arabic Mechanical Technology. - ISHAS 1. I, 1977, 559-560; II, 1978, 222-237.
6. Notice on an Important al-Jazari Manuscript. - JHAS. 2, 1978, No 2, 291-298.
7. Arabic Water- Clocks. Aleppo, 1981.

7a. al-Djazari, Badi` al-zaman. - EI^2. Suppl., 1982, 266-267.

8. A History of Engineering in Classical and Medieval Times, L., 1984.
9. Arabic Mechanical Engineering: Survey of the Historical Sources. - ASP. 1, 1991, No 2, 167-186.
10. Banu Musa. - EI^2. 7, 1993, 640-641.
11. Engineering. - EHAS. III, 1996, 751-795.
12. Banu Musa. - ENWC. 1997, 150-151.
13. Clocks and Watches. - ENWC. 1997, 208-210.
14. Al-Jazari. - ENWC. 1997, 472-473.
15. Technology in the Islamic World. - ENWC. 1997, 947-950.

al-Hindi (No 463)

1. Jumal al-falsafa. Problems of Philosophy. Introduction in Arabic and English by Fuat Sezgin. F.M., 1985.

Hinz, Walther

1. Einführung. - al-Mazandarani [1], 1952, 1-5.
2. Islamische Masse und Gewichte, umgerechtet ins metrische System. Leiden, 1955; 1970.
3. Musul'manskiye mery i vesa s perevodom v metricheskuyu sistemu. M., 1970.

Hirschberg, J. and Lippert, J.

1. `Ali b. `Isa. Lpz., 1904.

Hirschfeld, Hartwig

1. Abbas, Samuel abu Nasr, ibn. - JE. 1. N.Y., 1901, 37-38.
3. A Volume of Essays by al-Jahiz. - Oriental Studies Presented to E.G.Browne. Cambridge, 1922, 200-209.

"Histoire de la musique"

1. Histoire de la musique. 1. Des origines à Jean-Sebastian Bach. Ed. Roland Manuel. Tours, 1960.

"Historia"

1. Estudios sobre historia de la ciencia medieval. Ed. J.Vernet. Barcelona, 1980.
2. Historia de la ciencia arabe. Curso de conferencias des arolladas entre le dias 15 de enero y 12 de febraro de 1980. Ed. J.Vernet. Madrid, 1981.

"Historical Geography of Arabia'

1. Texts and Studies on Hystorical Geography and Topography of Central and South Arabia. Collection of papers ed. by Fuat Sezgin. F.M., 1993.

"Historical Geography of India'

1. Texts and Studies on Hystorical Geography and Topography of India and South East Asia. Collection of papers ed. by Fuat Sezgin. F.M., 1993.

Hitti, Philip K., Faris, Amin, and `Abd-al-Malik, Butrus

1. Descriptive Catalog of the Garrett Collection of University Library. Princeton, 1938.

Hoernerbach, Wilhelm

1. Deutschland und seine Nachbarlände nach der grossen Geographie des Idrisi. Stuttgart. 1938; "Studies on al-Idrisi" [2], 1992, 289-391.

Hofmann, Joseph Ehrenfried (1900-1973)

1. Geschichte der Mathematik. 1. Von den Anfängen bis zum Auftreten von Fermat und Descartes. 2. Aufl. B., 1963.

Hogendijk, Jan Pieter (b. 1955).

1. On the Trisection of an Angle and the Construction of a Regular Nonagon by Means of Conic Sections in Medieval Islamic Geometry. Jun Hujandik. Maqal `an tathlith al-zawiya wa insha` mutassa` bi-wasita ajza' makhrutiyya fi'l-handasa al-islamiyya fi'l-`usur al-mutawasita. - ISHAS 2, 1979, 60, Suppl. 86-87; Utrecht, 1979.
2. How Trisections of the Angle Were Translated from Greek to Islamic Geometry. - HM. 8, 1981, 417-438.
3. Rearranging the Arabic Mathematical and Astronomical Manuscript Bankipore 2468. Utrecht, 1982; JHAS. 6, 1982, 133-159.
4. Ibn al-Haytham's Completion of the Conics. Critical Edition with Transl. and Comm. of the 11th Century Reconstruction of Book VIII of Apollonius Conics. Ph. D. thesis, Utrecht, 1983.
5. Greek and Arabic Constructions of the Regular Heptagon. - AHES. 30, 1984, 197-330.
6. Al-Kuhi's Construction of an Equilateral Pentagon in a Given Square. - ZGAIW. 1, 1984, 100-144.
7. Thabit ibn Qurra and the Pair of Amicable Numbers 17296, 18416. - HM. 12, 1985, 269-273.
8. Ibn al-Haytham's Completion of the Conics. N.Y. - B. - Hb. - Tokyo, 1985.
9. Arabic Traces of Lost Works of Apollonius. - AHES. 35, 1986, No 3, 187-253.
10. Discovery of an 11th Century Geometrical Compilation: the Istikmal of Yusuf al-Mu'taman ibn Hud, King of Saragossa. - HM. 13, 1986, No 1, 43-52.
11. Le Kitab al-istikmal de l'al-Mu`taman ibn Hud, une source importante dans l'histoire de la geometrie ancienne et medievale. - "al-Multaqi" [1], 1986, 10-11.
12. Three Islamic Lunar Crescent Visibility Tables. Utrecht, 1987; JHA. 19, 1988, 29-44.
13. Abu'l-Jud's Answer to a Question of al-Biruni Concerning the Regular Heptagon. - "From Deferent to Equant" [1], 1987, 175-183.
14. Treatise on Geometry in al-Hindi's Problems of Philosophy. - ZGAIW. 4, 1987/88, 19-32.
15. New light on the Lunar Crescent Visibility Table of Ya`qub ibn Tariq. - JNES. 47, 1988, No 2, 96-104.
16. Le roi-geomètre al-Mu'taman ibn Hud et son livre de la perfection (Kitab al-Istikmal). Alger, 1988.
17. Occulte wiskunde. - Nieuwe Wiskrant. 7, 1988, No 3, 35-44.
18. The mathematical Structure of two Islamic Astrological Tables for "Casting the Rays". - Centaurus. 32, 1989, 171-202.
19. Sharaf al-Din al-Tusi on the Number of Positive Roots of Cubic Equations. - HM. 16, 1989, No 1, 69-85.
20. New Findings of Greek Geometrical Fragments in the Arabic Tradition. - Archivum Graeco-Arabicum. 1, Amsterdam, 1989, 22-24.
21. A Medieval Arabic Treatise on Mensuration by Qadi Abu Bakr. - ZGAIW. 6, 1990, 130-150.
22. Over de geschiedenis van de cijfers. - Nieuwe Wiskrant. 10, 1990, No 2, 10-12.

23. Al-Khwarizmi's Table of the "Sine of the Hours" and the Underlying Sine Table. - Historia scientiarum. 42, 1991, 1-12.
24. The Geometrical Parts of the Istikmal of Yusuf al-Mu'taman ibn Hud (11th Century). An Analytical Table of Contents. - AIHS. 41, 1991, 207-281.
25. al-Nayrizi. - EI^2. 7, 1993, 1050.
26. An Arabic Text on the Comparison of the Five Regular Polyhedra. "Book XV" of the Revision of the "Elements" by Muhyi al-Din al-Maghribi. - ZGAIW. 8, 1993, 133-233, arab. 146-186.
27. Pure Mathematics in Islamic Civilisations. - "Companion Encyclopaedia of the History and Philosophy of Mathematical Sciences". L. - N.Y., 1994, 70-79.
28. The Qibla Table in the Ashrafi Zij. - "Ad Radices". Festband zum fünfzigjährigen Bestehen des Instituts für Geschichte der Naturwissenschaften der Johann-Wolfgang Goethe-Universität, F. M., Stuttgart, 1994, 81-94.
28a. Four Constructions of Two Mean Proportionals between between Two Given Lines in the Book of Perfection (Istikmal) of al-Mu'taman ibn Hud. - JHAS. 10, 1994, No 1-2, 13-29.
29. Al-Mu'taman ibn Hud, 11th century King of Saragossa and Brilliant Mathematician (text of the plenary lecture on the XIXth International for History of Science, Zaragoza, 1993), HM. 22, 1995, 1-18.
30. Mathematics in Medieval Islamic Spain. - Proc. of the International congress of Mathematicians, August 3-11 1994, Zürich - Basel. 2, 1995, 1568-1580.
31. Al-Mu'taman's Simplified Lemmas for Solving "Alhazen's Problem". - "From Baghdad to Barcelona" [1]. I, 1996, 59-101.
32. Abu Ja`far al-Khazin. - ENWC. 1997, 3-4.
33. Conics. - ENWC. 1997, 235-236.
34. Mathematics in Islam. - ENWC. 1997, 637-640.
35. Al-Mu`taman ibn Hud. - ENWC. 1997, 753-754.
36. Sharaf al-Din al-Tusi. - ENWC. 1997, 894.
37. Ya`qub Tariq. - ENWC. 1997, 1044.
38. Al-Sijzi's Treatise on Problem Solving in Geometry. - ACIHS XX, 1997, 60.
39. Al-Nayrīzī's own prof of Euclid's paralel postulate.- "Sic itur ad astra", Wiesbaden, 2000, 252-265.
40. The contributions by Abū Nasr ibn 'Iraq and al-Sāghanī to the theory of seasonal hour lines on astrolabes and sundials.- ZGAIW, 14, 2001, 1-39.
41. The geometrical Works of Abū Saālūīd al-Darīr al-Jurjānī.- Sciamus, 2, 2001, 47-74.

Hoghoughi, Ascar

1. Catalogue critique des manuscrits de la Bibliothèque nationale et universitaire de Strasbourg. Strasbourg, 1964.

Holmyard, Eric John (1891-1959)

1. Maslama al-Majrîtî and the Rukbatu'l-Hakîm. - Isis. 6, 1923, 293-305.
2. Alchemy in Medieval Islam. Jabir, Razi and Avicenna. - The Islamic Review. 1955, No 10, 23-29.
3. Jabir ibn Hayyan. - Proc. of Royal Society of Medicine. 16. Histor. Section, 1963, 46-57.

Homes, H. A.

1. The Alchemy of Happiness by Mohammed al Ghazzali, the Momammedan Philosopher. Albany, 1873.

Homil [Hamil], Yoqub

1. Zahiriddin Muhammad Bobir. Toshkent, 1949.

Horn, P.

1. Aus italienischen Bibliotheken. - I. Die persischen und türkischen Handschriften des Vatikans. - ZDMG. 51, 1897, 1-65.
2. Persische Handschriften in Constantinopel. - ZDMG. 54, 1900, 275-332, 475-509.

Horten, Max (1874-1945)

1. Das Buch der Ringsteine Fârâbîs. Münster, 1906.
2. Das Buch der Genesung der Seele. Eine philosophische Enzyklopädie Avicennas. Die Methaphysik des Averroes enthaltend Methaphysik, Theologie, Kosmologie und Ethik, übersetzt und erläutert. Halle a/S, 1907-1909.
3. Die philosophischen Ansichten von Râzî und Tusî. Bonn, 1910.
4. Die Philosophie des Abu Raschîd (um 1068), aus dem Arabischen übersetzt und erläutert. Bonn, 1910.
5. Die Philosophie der Erleuchtung nach Suhrawardî. Halle a/S, 1912.
6. Die Metaphysik des Averroes. Halle a/S, 1912.

7. Die spekulative und positive Theologie des Islam nach Râzî und ihre Kritik durch Tusî. Lpz., 1912.
8. Avicennas Lehre vom Regenbogen nach seinem Werk al-Schifâ'. - Meteorolog. Zeitschr., 30, 1913, No 11, 535-544.
9. Texte zu dem Streite zwischen Glauben und Wissen im Islam. Die Lehre von Propheten und der Offenbarung bei Farabi, Avicenna und Averroes. Bonn, 1913.

Hoshim, Rahim

1. Ibni Sino. Mukhtasari dar borai dawron, zindagi, sharhi hol wa osorash. Dushanbe, 1973.

Hourani, George F.

1. The Chronology of al-Ghazali's Writings. - JAOS. 79, 1939, 225-233.
2. Essays on Islamic Philosophy and Science. Albany, 1975.
3. Ibn Tufayl. - DSB. 13, 1976, 488-489.

Houtsma, Martin Theodor (1851-1943)

1. Catalogue d'une collection de manuscrits arabes et turcs appartenant à la maison E.J.Brill à Leyde. 1886.
2. al-Baghdadi, Abu'l-Barakat. - EI. 1, 1913, 111-113.

Houzel, Christian

1. Histoire de la théorie des parallèles. - "Mathématiques et Philosophie", 1991, 163-179.
2. Sharaf al-Din al-Tusi et le polygone de Newton. - ASP, 5, 1995, No 2, 239-262.

Hoyrup, Jens Egede (b. 1943)

1. Algebraic Traditions behind Ibn Turk and al-Khwarizmi. Roskilde, 1985.
2. Al-Khwarizmi, Ibn Turk, and Liber Mensurationum: on the Origins of Islamic Algebra. - Erdem. 5, 1986, No 2, 445-484.

Huart, Clement (1854-1919)

1. `Ali ibn Abi Talib. - EI. 1, 1913, 283-285.
2. Baber. - EI. 1. 1913, 547-548.
3. al-Bal<u>kh</u>i. - EI. 1, 1913, 624-62550.
4. al-<u>Dj</u>ami. EI. 1, 1913, 1011.
5. Belhî. - IA. 2, 1943, 487.

Huart, C. and Masse, H.

1. al-<u>Dj</u>ami. EI^2. 2, 1965, 421-422.

Hubbi, Yusuf

1. Hunayn ibn Ishaq. Baghdad, 1394 h. [1974].

Huduw, Hamid Majid

1. Makhtutat maktaba al-`allama al-hujja al-Sayyid `Abbas al-Husayni al-Kashani. I. Karbala, 1966.

Hughes, Barnabas

1. Gerard of Cremona's Translation of al-Khwarizmi's Al-Jabr. A Critical Edition. - Medieval Studies. 48, 1986, 322-263.
2. Problem-solving by Ajjub al-Basri, an Early Algebraist. - JHAS. 10, 1994, No 1-2, 31-39.
3. Indian Roots for Latin Problems? - Ganita Bharati. 17, 1995, No 1-4, 1-9.

Hugonnard-Roche, Henri (b. 1944)

1. L'Epitome du De Caelo d'Aristote par Averroès. - ISHAS 2, 1979, Suppl. 101.
2. La classification des sciences de Gundissalinus et d'influence d'Avicenne. - "Etudes sur Avicenne". P., 1984, 41-75.
3. La théorie astronomique selon Jabir ibn Aflah. - History of Oriental Astronomy. In-ternational Astronomical Union. Colloquium 91. Cambridge, 1987, 207-208.
4. The Influence of Arabic Astronomy in the Medieval West. - EHAS I, 1996, 284-305.

Huisman, A. J. W.

1. Les manuscrits arabes dans le monde. Une bibliographie de Catalogues. Leiden, 1967.

Hujjati, Muhammad Baqir

1. Fihrist-i kitabkhana-yi Danishkada-yi Ilahiyat wa ma`arif-i islami-yi Danishgah-i Tehran. 1-2. Tehran, 1345-1348 s. h. [1966-1969].

Humai, Jalal al-Din

1. Ghazzali-nama. Tehran, 1315 s. h. [1936].
2. Ibn Sina. - Mihr. 5, 1316 s.h. [1937], 25-31, 147-154, 249-257.
3. Khayyam-nama. I. Tehran, 1346 s. h. [1967].

Hunger, H. and Vogel, K.

1. Ein byzantinisches Rechenbuch des 15. Jahrhunderts. Wien, 1963.

Hunke, Sigfrid

1. Al-Hwarismi. - GWG. 3. Zürich, 1973, 52-64.

Hunter, W.

1. Account of the Astronomical Labours of Jaya Simha, Rajah of Ambher, or Jayanagar. - Asiatic Research, L., 1799, 177-211,

Husaini, Q. S. Kalimullah

1. Contribution of Zahiru'd-Din al-Bayhaqi to Arabic & Persian Literature. - Islamic Culture. 24, 1960, No 1, 49-62, No 2, 77-89.

Husayni Harawi (No 1278)

1. Ma`lumat al-afaq. Lucknow, 1287 h. [1870], 1290 h. [1873].

al-Husayni al-Isfahani (No 875)

1. Danish-nama-yi jihan. Lucknow, 1297 h. [1880].

Huseini, I. M.

1. The Life and Works of Ibn Qutayba. Beirut, 1950.

Hyath, Arthur and Munther, Suessmann.

1. Maimonides, Moses. - EJ. 11, 1973, 754-781.

al-`Ibadi, Hunayn ibn Ishaq (No 77)

1. Liber de oculis. Ed. P.Pansier. - Collectio ophtalmologica veterum auctorum. 7, 1909.
2. Kitab al-`ashar maqalat fi'l-`ayn al-mansub li-Hunayn ibn Ishaq. The Book of the Ten Treatises on the Eye Ascriben to Hunain ibn Ishaq (809-877 A.D.), Ed. and transl. by Max Meyerhof. Cairo, 1928; F.M., 1986.
3. Le livre des questions sur l'oeil de Honein ibn Ishaq. Ed. et trad. par P.Sbath et M.Meyerhof. - Mémoires présentés à l'Institut d'Egypte. 36. Le Caire, 1938.

al-`Ibadi, Ishaq ibn Hunayn (No 114)

1. Ta'rikh al-atibba'. Ed. and transl. by F.Rosenthal. - Oriens. 7, 1954, 55-84.

Ibadov, Jawadulla Hamidullya ughli

1. O matematicheskikh rukopisyakh iz biblioteki SADUM. - "Matematika Vostoka" [2], 1978, 154-160.
2. O nekotorykh rukopisyakh traktata Baha al-Dina al-Amili "Sushchnost' arifmetiki" (Khulasat al-hisab). - "Ibn Sina" [14], 1981, 139-142.
3. O matematicheskom traktate iz g. Khivy. - "Ibn Sina" [14], 1981, 143-154.
4. Matematicheskiye traktaty al-Hububi i al-Sijawandi. - "Iz istorii" [4], 1983, 72-81.
5. Tvorchestvo al-Khorezmi v otsenke vostochnykh uchonykh-entsiklopedistov X-XVI vv. - "al-Khorezmi" [4], 1985, 265-268.
6. Matematika v srednevekovykh arabskikh entsiklopediyakh X-XVII vv. (po rukopis-nym materialam). - ADK (fm). Tash., 1986.
7. Mathematical Manuscripts by al-Hububi, al-Sajawandi and al-`Amili in the Library of the Muslim Religious Board for Central Asia and Kazakhstan. - SHMS. 12, 1993, No 1-2, 81-88.
8. O rukopisyakh traktata "Sushchnost' arifmetiki" Baha ad-Dina Amili, khranyash-chikhsya v bibliotekakh Tashkenta. - Matviyevskaya, Ibadov, and Sadritdinova [1] (86-91).
9. Arabskiye i persidskiye entsiklopedii X-XVIII vv. kak istochniki po istorii tochnykh nauk. - ADD (i), Tash., 1994.

Ibadov, Rahmatulla Ibad ughli (1917-1975)

1. O metodakh opredeleniya sinusa odhogo gradusa. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk. 1967, No 3, 19-22.
2. O razlichhnykh metodakh opredeleniya sinusa odnogo gradusa. - Uch. zap. Samarkand. gos. universiteta, ser. matem., 1968, 97-109.
3. Iz istorii trigonometricheskikh tablits. ADK (fm). Tash., 1968.
4. Trigonometricheskiye tablitsy Beruni. - ONU. 1973, Nos 7-8, 96-98.
5. O sinuse odnogo gradusa al-Farabi v shkole Ulugbeka. - "al-Farabi" [4], 1975, 67-68.

Ibel, Thomas

1. Die Waage im Altertum und Mittelalter. Inaugural-Dissertation. Erlangen, 1908.

Ibn al-Abbar (No 590)

1. Aben al-Abbar. Almocham (dictionarium ordine alphabetico) de discipulis Abu Ali Assadafi. ed. F.Codera et Zaydin. - Bibliotheca Arabico-Hispana. 4. Matriti, 1886.
2. Aben al-Abbar. Complementum libri Assilah (Dictionarium biographicum), ed. F. Codera et Zaydin. 1-2. - Bibliotheca Arabico-Hispana. 5-6. Matriti, 1887-1889.

Ibn Abi Mansur (No 31)

1. al-Zij al-Ma'muni al-mumtahan. The Verified Astronomical Tables for the Caliph al-Ma'mun. With Introduction in English and Arabic by E.S.Kennedy. F.M., 1986.

Ibn Abi'l-Rijal (No 353)

1. Albohazeni Haly filii Abenrageli de iudiciis astrorum summa cura et diligenta studio de extrema barbarie vindicati, ac latinati donati per Antonium Stupam Rhoetum Praegali. Ve-netiae 1485; Basileae, 1551.
2. Aly Aben Ragel. El libro complido en los iudizios de las estrellas. Traduccion hacha en la corte de Alfonso del Sabio. Introduccion y edicion par Gerold Hilty. Madrid, 1954.

Ibn Abi Usaybi`a (No 601)

1. Ibn Abi Osaiba. Abdallatiphi Bagdadensis vita, ed. and transl. by John Monsley. Ox., 1808.
2. `Uyun al-anba fi tabaqat al-atibba. Nashara Imr al-Qays ibn al-Tahhana. 1-2. al-Qahira, 1882.
3. `Ujun el-anbâ fî tabaqât el-atibbâ. Herausg. A.Müller. 1-2. Königsberg, 1884; Beirut, 1985.
4. Ibn Abi Uçaibia. Sources d'Informations sur les classes des medecins. Trad. et annote par Henri Jahier et Abdelkader Noureddine. Chapitre 13. Alger, 1958.

Ibn `Adhârî

1. Histoire de l'Afrique et de l'Espagne et fragments de la chronique d'Arîb. Publ. par R.Dozy. 1-2. Leyde, 1848-1851.

Ibn `Adi (No 198)

1. Yahya ben `Adi. Petits traites apologetiques. Texte arabe et traduction française par Augustin Perier. P., 1920.

Ibn Aflah (No 448)

1. Geberi filii Affla Hispalensis de astronomie libri IX. Ed. P.Apianus. Norimberqae, 1534.

Ibn Badroun `Abd al-Malik al-Hadrami (12-13th c.)

1. Commentaire historique sur la poème d'Ibn Abdoun. Publ. par R.Dozy. Leyde, 1846.

Ibn al-Bahlul (No 288)

1. Kitab al-dalail. The Book of Indications. F.M., 1985.

Ibn al-Baghdadi (No 321)

1. Traktat o soizmerimykh i nesoizmerimykh velichinakh. Per. G.P.Matviyevskoy.Tash. 1977.

Ibn Bajja (No 436)

1. Kitab al-nabat de Avempace. Ed. y trad. española por M.Asin Palacios. - al-Andalus. 5, 1940, 255-299.
2. Avempace. El regimen del solitario. Ed. y trad. española por M.Asin Palacios. Madrid - Grenada, 1946.
3. Kniga o dushe. Per. A.V.Saghadeyeva. - "Izbrannyye proizvedeniya" [1], 1961, 291-324.
4. Ibn Bajjah (Avempace), Opera phiposophica. Ed. by M. Fakhry. Beyrut, 1986.

Ibn al-Banna (No 696)

1. Le Talkhys d'Ibn Albannâ. Publ. et trad. par A.Marre. - Atti dell'Accad. Pontif. de' Nuovi Lincei. 17, 1864, 289-319.
2. Calendrier d'Ibn al-Bannâ' de Marrakech (1256-1321). Trad. par H.P.J.Renaud. P., 1948.
3. Al-Talhîs a`mal al-hisab. Ed. et trad. par Mohammed Souissi. Tunis, 1969.

Ibn Bashkuwal (No 492)

1. Aben-Pascualis Assila (Dictionarium biographicum). Ed. F.Codera. 1-2. - Bibliotheca Arabico-Hispana. 1-2. Matriti, 1883.

Ibn al-Faradi (No 286)

1. Aben Alfaradhi. Historia virorum doctorum Andalusiae (dictionarium biographicum). Ed. F.Codera. 1-2. - Bibliotheca Arabico-Hispana. 7-8. Matriti, 1891-1892.

Ibn Farhun

1. Dibaj al-mudhahhab fi ma`rifa a`yan `ulama al-madhhab. al-Qahira, 1351 h. [1932]; 1356 h. [1937].

Ibn Hawqal (No 214)

1. Opus geographicum auctore Ibn Haukal [Surat al-ard]. Ed. J.H.Kramers. 1-2, Lugduni Batavorum, 1938-1939; re-ed. by Fuat Sezgin. F.M., 1992.
2. Configuration de la Terre. Trad. par J.H.Kramers et G.Wiet. 1-2, Beyrouth, 1964-1965.

Ibn al-Haytham (No 327)

1. Alhazeni Arabis Opticae Thesaurus. Ed. a F.Risnero. Basileae, 1572; re-ed. with introduction by D.Lindberg. N.Y., 1972.
2. Tractatus Hazeni Heitemidae Arabis de accuratè inveniendi elevatione poli. Ex Arabico in Latino conversus a J.Golio. Lugduno-Batavorum. 1643.
3. Maqala fi'l-daw. al-Qahira, 1336 h. [1918].
4. Rasail. Haydarabad, 1357 h. [1938].
4a. A Discourse on the Concave Spherical Mirror. Transl. by M.J.J.Winter and W.Arafat.- JRASB, 16, 1950, 1-22.
5. Traktat ob izoperimetricheskikh figurakh. Per. i prim. J.al-Dabbakha. - IMI. 17, 1966, 399-448.
6. Ob izmerenii shara. Per. i prim. J.al-Dabbakha. - FMNSV. 2, 1969, 135-146.
7. Maqalat-i Ibn Haytham. Karachi, 1969.
8. Maqala fi'l-shukuk `ala Bitlimyus. Nasharu `A.I.Sabra wa I.al-Shahabi. al-Qahira, 1971.
9. Das achte Buch zu den Conica des Apollonios von Perge rekonstruiert von Ibn al-Haysam. Herausg. und eingeleitet von N.Terzioğlu. Istanbul, 1974.
10. Ibn al-Haytham's Commentary on the Premises of Euclid's Elements (Sharh musadarat kitab Uqlidis fi al-'usul). Book I-VI. 1. English text. 2. Arabic text. Ed. by Barbara Huper Sude. Dissertation. Princeton, 1975.
11. Traktaty o zazhigatel'nykh zerkalakh. Per. I.O.Mohammeda i N.V.Orlovoy, prim. N.V.Orlovoy i B.A.Rozenfel'da. - IAI, 15, 1980, 305-338.
12. Kitab al-manazir. Books I-III (On direct vision). Ed. by A.I.Sabra, Kuwait, 1983.
13. Kitab fi hall shukuk kitab Uqlidis fi'l-usul wa sharh ma`aniha. On the Resolutions of Doubts in Euclid's Elements and Interpretations of Its Special Meaning. With Introduction in English and Arabic by Matthias Schramm. F.M.. 1985.
14. Optics. Books I-III On Direct Vision. Transl. with Introd. and Comm. by A.I.Sabra, 1-2, L., 1989.

"Ibn al-Haytham" (memorial collection)

1. Ibn al-Haitham. Proc. of the Celebrations of 1000-th Anniversary Held under the Auspices of Hamdard National Foundation. - Voice of Eastern Medicine. 13, 1970.

Ibn Hayyan (No 9)

1. Geberi Liber misericordiae. Eine lateinische Übersetzung des grösseren Kitab al-rahma. - Archiv für Geschichte der Medizin. 17, 1925, 181-197.
2. Musannafat fi `ilm al-kimiya. Paris, 1928. The Arabic Works of Jâbir ibn Hayyân. P., 1928.
3. Mukhtar rasail Jabir ibn Hayyân. Textes choisis. Ed. par Paul Kraus. P. - Le Caire, 1354 h. [1935].
3a. Oeuvre chymique de Geber. La somme de la perfectiob ou l'abregedu magistère. 1-2. P., 1976.
4. Dix traités d'alchimie. Les dix premiers traités du livre de Soixante-dix. Ed. avec la trad. française et comm. par Pierre Lory. P., 1983.
5. Kitab al-Sab`in. The book of Seventy. With Introduction in Arabic and English by Fuat Sezgin. F.M., 1986.

6. Tadbir al-iksir al-a`zam. L'élaboration de l'élixir suprême. Quatorze traités ed. avec la trad. française et comm. par Pierre Lory. P., 1988.

Ibn Hazm (No 374)

1. Kitab al-fisal fi'l-milal wa'l-ihwa' wa'l-nihal. al-Qahira, 1-5. 1317-1321 h. [1899-1903]; 1347 h. [1928].
2. Tauq al-hamâma. Publ. par D.K.Petrof d'après l'unique manuscrit de la Bibliothèque de l'Université de Leyde, 1914.
3. A Book Containing the Risala Known as the Dove's Neck-Ring about Love and Lovers. Transl. by A.R.Nykl. P., 1931.
4. Ozherel'ye golubki. Per. M.A.Sal'ye. M.-Lg., 1933; M., 1957.
5. Der Halsschmuck der Taube. Übers. von W.Weissweiler. Leiden, 1941.
6. Le collier du pigeon ou De l'amour et des amants. T'awq al H'amâma fi'l-Ulfa wa'l-Ullâf. Ed. et trad. par Leon Bercher. Alger, 1949.
7. Tawq al-hamama fi'l-ulfa wa'l-ullaf. Nashara Hasan Kamil al-Sayrati. al-Qahira, 1369 h. [1950].
8. Abenhazam de Cordoba. El collar de paloma. Trad. por G.Garcia Gomez. Madrid, 1952.
9. The Dove's Neck-ring. Transl. by A.J.Arberry. L., 1953.
10. Rasail Ibn Hazm al-Andalusi. Nashara Ihsan Rashid `Abbas. al-Qahira. Undated.

Ibn Hibinta (No 55)

1. al-Mughni fi ahkam al-nujum. The Sufficient Help in Astrology. 1-2. With Introduction in Arabic and English by Fuat Sezgin. F.M., 1986.

Ibn `Iraq (No 299)

1. Rasail Abi Nasr ila'l-Biruni. Haydarabad, 1365 h. [1946].

Ibn Khaldun (No 771)

1. Ebn Khaldoun. Prolégomènes. Trad. E.Quatremère. - NEM. 16, No 1, 17, No 1, 18, No 1. P., 1858; Beyrouth, 1970.
2. Kitab al-`ibar. al-Qahira, 1284 h. [1867].
3. Miftah al-`ibar. Istambul, 1276 h. [1859].
4. Muqaddima. Beirut, 1900.
5. Ausgewählte Abschnitte aus der Muqaddima. Übers. A.Schimmel. Tübingen, 1951.
6. An Arab Philosophy of History. Sections from the Prolegomena of Ibn Khaldun of Tunis (1332-1406). Transl. and arranged by Charles Issawi. L., 1955.
7. Ibni Haldun. Mukaddime. Çev. Zakir Kadir Ugan. Istanbul, 1954-1957.
8. The Muqaddimah or Introduction to History. Transl. by F.Rosenthal. 1-4, L., 1958, 1967.
9. Vvedeniye (fragmenty). Per. S.M.Batsiyevoy. - "Izbrannyye proizvedeniya", 1961, 557-628.
10. Ibn Khaldoun. Discours sur l'histoire universelle (Al-Mucaddima). Trad. V.Mouflil. Beyrouth, 1963.
11. Ibn Chaldun. Cas kralovstvi a riši. Prel. Ivan Hrbek. Praha, 1972

Ibn Khallikan (No 625)

1. Ibn Challikani Vita illustrium virorum nunc primum arabice edita, ed. F.Wüstenfeld. Gottingae, 1835-1843.
2. Ibn Khallikan's Bibliographical Dictionary. Transl. Mac Guckin de Slane. 1-4. P.-L., 1843-1871.
3. Kitab wafayat al-a`yan wa anba abna al-zaman. Tehran, 1284 h. [1867]; al-Qahira, 1269 h. [1853], 1299 h. [1882], 1310 h. [1892-1893], 1328 h. [1910].
4. Wafayat al-ayan wa anba anba al-zaman. Nashara M.M.Abd al-Hamid. al-Qahira, 1949.
5. Kitab wafayat al-a`yan wa anba abna al-zaman. Nashara I.`Abbas. 1-8, Beirut, 1968-1972.

Ibn al-Khasib (No 99)

1. Albubatheri Alchasili filii de nativitatibus. Venetiae, 1492; 1501.

Ibn Khurdadbih (No 120)

1. Le Livre des routes et des provinces. Publie, traduit et annoté par Casimir Barbier de Meynard. - JA (6). 5, 1865, 5-127; re-ed. par Fuat Sezgin. F.M., 1992..
2. Kitab al-masâlik wa'l-mamâlik auctore Ibn Khordhadbeh. Accedunt excerpta e Kodama ibn Dja`far, cum versione gallica ed. M.J.De Goeje. Lugduno-Batavorum, 1889; re-ed. by Fuat Sezgin. F.M., 1992.
3. Kniga putey i stran. Per. i issledovaniye N.Velikhanovoy. Baku, 1986.

Ibn Labban (No 308).

1. Principles of Hindu reckoning. Ed. and transl. by M.Levey and M.Petruck. Madison, Milwaukee, 1965.

2. Risala fi Usul hisab al-Hind. Nashara A.S.Sa`idan. - MMMA. 13, 1967, 41-83.

Ibn Majid (No 904)

1. Thalath azhar fi ma`rifa al-bihar. Tahqiq wa nashr T.Shumufski. al-Qahira, 1969.
2. Ahmad ibn Majid al-Najdi. Arab Navigation in Indian Ocean before the Coming of the Portuguese Being a Translation of Kitab al-Fawaid fi usul al-bahr wa'l-qawa`id. With Introduction and a Glossary by G.B.Tibbets. L., 1971; 1981.
3. Kitab al-Fawa'id. Ed. by I.Khoury. Damascus. 1971.
4. Kniga pol'z ob osnovakh i pravilakh morskoy nauki. I. Issledovaniye, per. i komm. T.A.Shumovskogo. M., 1985. II. Kriticheskiy tekst. M., 1984.

Ibn Mansur (No 877)

1. Auszüge aus dem persischen Werke Djavahir Nameh. Übers. von J.von Hammer. - Fundgruben des Orients. 6. Wien, 1818, 126-142.
2. Jawahir-nama. Istanbul, 1274 h. [1858].
3. Gawahir-namah. Ba kushish-i Minuchihr Sutuda. - Farhang-i Iran-zamin, 4, 1335 s.h. [1956], No 3, 185-302.

Ibn Masawayh (No 65)

1. Le livre de temps de Jean ibn Masawaih. Trad. et annoté par G.Troupeau. - Arabica. 15, 1968, 113-141.
2. Le livre des axiomes médicaux. Ed. du texte arabe et des versions latines avec trad. française et lexique par Danielle Jacquart et Gerard Troupeau. Genève, 1980.

Ibn al-Muthanna (No 210)

1. Ibn al-Muthanna's Commentary on the Astronomical Tables of al-Khwarizmi. Two Hebrew Versions. Ed. and Transl. with an Astronomical Commentary by B.R.Goldstein. New Haven - L., 1967.

Ibn al-Nadim (No 272)

1. Kitâb al-Fihrist von Abu'l-Farağ Muh. b. Ishâq, bekannt unter dem Namen Ibn Abî Ja'qub el-Nadîm. Herausg. von G.Flügel, J.Roediger und A.Müller. 1-2, Lpz., 1871-1872 (KF); al-Qahira, 1966.
2. Das Mathematiker-Verzeichniss im Fihrist des Ibn Abî Ja'qub an-Nadîm. Übers. H.Suter. - AGMW. 6, 1892, 1-87; Suter [73], 1986. I. 315-404.
3. Some Hitherto Unpublished Texts on the Mu'taziilite Movement from Ibn al-Nadim's Kitab al-Fihrist. Ed. by J.Fück. - Shafi` armaghan. Lahur, 1955, 51-74.
4. The Fihrist of al-Nadim. Ed. and Transl. by Bayard Dodge. 1-2. N.Y. - L., 1970.
5. Kitab al-Fihrist li'l-Nadim, ba ihtimam-i Rida Tajaddud. Tehran, 1350-1352 s.h. [1971-1973].

Ibn al-Qifti (No 579)

1. Ibn al-Qiftî's Ta'rîh al-hukamâ'. Herausg. von J.Lippert. Lpz., 1903.
2. Ikhbar al-`ulama bi-akhbar al-hukama. al-Qahira, 1326 h. [1908].

Ibn Qurra (No 103)

1. Kitab al-dhakhira fi `ilm al-tibb. Nashara G.Subhi. al-Qahira, 1928.
2. Tabit b. Qurra. Ein Werk über ebene Sonnenuhren. Herausg., übers. und erläutert von K.Garbers. - QS (A). 4, 1936.
3. Rasail Ibn Qurra. Haydarabad, 1359 h. [1940]
4. Kniga o dokazatel'stve izvestnogo postulata Yevklida. Per. B.A.Rozenfel'da i A.P. Yushkevicha. - IMI. 14, 1962, 593-597.
5. Kitab fi `amal shakl mujassam dhi arba` `ashara qa`ida tuhitu bihi kura ma`luma. Tahqiq Rashid `Abd al-Razzaq al-Salihi. - Majalla kulliyya al-adab al-`Iraqiyya li-sana 1962. Baghdad, 1962, 6-10.
6. Thâbit ben Qurra. On the Solar Year and on the Motion of the Eighth Sphere. Transl. and Comm. by O.Neugebauer. - Proc. of Amer. Philos. Society. 106, 1962, 264-299.
7. Kniga o tom, chto dve linii, provedyonnyye pod uglami, men'shimi dvukh pryamykh, vstretyatsya. Per. i prim. B. A. Rozenfel'da. - IMI. 15, 1963, 363-380.
8. Kniga o sostavnykh otnosheniyakh. Per. i prim. B.A.Rozenfel'da i L.M.Karpovoy. - FMSB. I, 1966, 9-39.
9. Kniga o chasovykh priborakh (otryvki). Per. L.M.Karpovoy i N.G.Khayretdinovoy. - "Bashmakova" [1], 1975, 199-201.
10. Matematicheskiye traktaty. Per. J.ad-Dabbakha, L.M.Karpovoy, B.A.Rozenfel'da, A.Yu.Sansura i dr. Stat'ya B.A.Rozenfel'da. - Nauchnoye nasledstvo. 8, M., 1984.
11. Thabit ibn Qurra. Oeuvres d'astronomie. Texte établi et traduit par R.Morelon. Al-muallafat al-falakiyya li-Thabit ibn Qurra. Tahqiq wa tarjama Rijis Murlun. Paris - Baris, 1987.

Ibn Qutayba (No 94)

1. Kitab al-ma`arif. Herausg. von F.Wüstenfeld. Göttingen, 1850.
2. Verhandelingen over de poezie. Herausg. von H.W.C.Rittenshausen. Leiden, 1875.
3. `Uyun al-akhbâr, 1-4. Herausg. von C.Brochelmann. Weimar-Strassburg, 1898-1908.
4. Kitab Adab al-Kâtib. Herausg. von M.Grünert. Leiden, 1900.
5. Liber Poesis et Poetarum. Ed. M.J.de Goeje. Lugduno-Batavorum, 1904.
6. The Natural History Section from 9th Century "Book of Useful Knowledges". The `Uyun al-Akhbar of Ibn Qutayba. Transl. by L.Kopf, ed. by F.S.Bodenheimer and L.Kopf. P. - Leiden, 1949.
7. Kitab al-anwa'. Haydarabad, 1956.
8. `Uyun al-akhbar. al-Qahira, 1925.
9. Kitab al-ma`arif. al-Qahira, 1960.

Ibn Qutlubugha (No 846)

1. Tağ at-tarağim fi tabaqat al Hanafiya (Die Krone des Lebensbeschreibungen enthal-tend die Klasse der Hanefiten). Herausg. von G.Flügel. Lpz., 1862.

Ibn al-Raqqam (No 670)

1. Risala fi `ilm al-zilal. Edicion y commentario por Joan Carandell. Barcelona, 1988.

Ibn Ridwan (No 369)

1. Haly Eben Rodoni sive Rodohoni Aegyptii in Ptolemaei Quadripartitum commentarii ex traditione Aegidii de Tebaldis. Venetiae, 1493, 1519.
2. Le livre de la méthode de medecin. Texte arabe ed., trad. et comm. par Jacques Grand' Henry. Louvain, 1979-1984.
3. Medieval Islamic Medicine: Ibn Ridwan's Treatise "On the Prevention of Bodily Ills in Egypt". Transl. with introd. by Michael W.Dols. Arabic text ed. by Adil S.Gamal. Berkeley, 1984.

Ibn Rushd (No 512)

1. Colliget Averrois. Venetiae, 1482, 1562.
2. Colliget Averroys. Ed. Hieronymus. Venetiae, 1496.
3. Averrois in Aristotelis libros Meteorologicum expositio media. Venetiae, 1562.
4. Tahafut al-tahafut. al-Qahira, 1303 h. [1886].
5. Fasl al-maqal. Damima. Kitab al-Kashf `an manahij ad-adilla. al-Qahira, 1320 h. [1902].
6. Ibn Rochd (Averroès). Traité décisif (Façl el-maqal) sur l'accord de la religion et de la philosophie suivi de l'Appendice (Dhamîma). Texte arabe, trad. par L.Gauthier. Alger, 1905; 1942; 1983; P., 1988.
7. Die Hauptlehren des Averroes nach sein Schrift: Die Widerlegung des Gazâlî. Übers. von M.Horten. Bonn, 1913.
8. Avarroes. Die Epitome der Metaphysik des Aristoteles. Übers. und erläut. von S.Van den Bergh. Leiden, 1924.
9. Averroes. Tahâfot at-Tahâfot (L'incohérence de l'incohérence). Texte arabe établi par Maurice Bouyges. Beyrouth, 1930.
10. Averroes. Quitab el Culiat (Libro de Generalidades). Larache, 1939.
11. Traité décisif - Façl el-maqâl: sur l'accord de la religion et de la philosophie, suivi de l'appendice "Dhamîma". Texte arabe, traduction française remaniée avec notes et introd. par Léon Gauthier. Alger, 1942.
12. Averrois Tafsir mâ` ba'd al-Tabî`at. Texte arabe inédit, etabli par M.Bouyges. 1-4. Beyrouth, 1948; 1967-1973.
13. Rasail. Haydarabad, 1366 h. [1947].
14. Corpus commentariorum Averrois in Aristotelem. Ed. H.A.Wolfson, D.Beneth, F.H.Fobs. 1-6. Cambridge, Mass., 1949-1953.
15. Averroes' Tahafut al-Tahafut (The incoherence of the incoherence). Transl. with introd. and notes by S.Van den Bergh. 1-2. Ox., 1954; 1969.
16. Averroes' Commentary on Plato's "Republic". Ed. with introduction and notes by E.L.J.Rosenthal. Cambridge, 1956.
17. Kitab Fasl al-Maqal with Its Appendix (Damima) and an Extract from Kitab al-Kashf `an Manahidj al-adilla. Arabic Text ed. by G.F.Hourani. Leiden, 1957.
18. Averroes. On the Harmony of Religion and Philosophy. A translation with introduction and notes of Ibn Rushd's Kitab fasl al-maqal by G.F.Hourani. L., 1961.
19. Oproverzheniye oproverzheniya (fragmenty). Per. A.I.Rubina i A.V.Saghadeyeva. - "Izbrannyye proizvedeniya" [1], 1961, 399-554.

20. Averroes. Epitome of Parva Naturalia. Transl. from Arabic, Hebrew and Latin Versions with Notes and Introd. by Harry Blumberg. - Corpus commentatorium Averrois in Aristotelem. 7, Cambridge, Mass., 1961; 1972.
21. Averroes. In Aristotelis librum II Metaphysicorum commentarius. Herausg. von Gion Darms. Freiburg, 1966.
22. Averroes. A Treatise Concerning the Substance of the Celestial Sphere. - Philosophy in the Middle Ages. N.Y., 1967.
23. Averroes, Commentary on Plato's "Republic". Ed. with introd., transl. and notes by E.I.J.Rosenthal. Cambridge, 1969.
24. Rassuzhdeniye, vynosyashcheye resheniye otnositel'no svyazi mezhdu religiey i filosofiyey. Per. A.V.Saghadeyeva. - Saghadeyev [3], 1973, 171-199.
25. Averroes on Plato's "Republic". Transl. with introd. and notes by R.Lerner. Ithaca, N.Y., 1974.
26. Three Short Commentaries on Aristotle's "Topics", "Rhetoric", and "Poetics". Ed. and transl. by Ch.Butterworth. Albany, N.Y., 1977.
27. Averroes' Middle Commentary on Aristotle's "Categories" and "De interpretatione". Transl. with introd. by Ch.Butterworth. Princeton, 1983.
28. Metaphysics. Transl. Ch.Genequand. Leiden, 1984; 1986.
29. Averroès. Grand commentaire de la Métaphysique d'Aristote. Tafsir Mâ` ba`d at-tabî`at, livre LAM-LAMBDA. Trad de l'arabe et annot. par Aubert Martin. P., 1984.
30. Averroes' Middle Commentary on Aristotle's "Poetics". Transl. with introd. by Ch.Butterworth. Princeton, 1986.
31. Kitab al-Kulliyyat. Critical Edition by J.M.Forneans and C.Alvarez Morales. Madrid, 1987.
32. L'accord de la religion et la philosophie. Trad de l'arabe et annot. par L.Gauthier. P., 1988.
33. Sharh kitab Aristutalis fi l-Sama' wa-l-`alam. Commentary on Aristotle's Book on the Heaven and the Universe. With an Introd. by G.Endress. F.M., 1994.

Ibn Rusta (No 112)

1. Ibn Dasta. Izvestiya o khozarakh, burtasakh. bolgarakh, mad'yarakh, slawyanakh i rusakh. Izdaniye s russkim perevodom D.A.Khvol'sona. SPb, 1869.
2. al-Mujallad al-sabi` min kitab al-a`laq al-nafisa. Tasnif Abu `Ali Ahmad ibn `Umar ibn Rusta. Kitâb al-'alâq' an-nafîsa, auctore Abu Alî Ahmad ibn `Omar Ibn Rosteh et Kitab al-Boldân auctore al-Jakubî. Bibliotheca geographorum arabicorum, ed. M.J. de Goeje, Lugdu-ni Batavorum, 1892, 1-229; re-ed. by Fuat Sezgin. F.M., 1992.
3. Les Atours précieux. Trad. par G.Wiet. Le Caire, 1955.
4. Kitab al-a`laq al-nafisa. Baghdad. Undated.

Ibn al-Sa`ati (No 562)

1. Kitab `ilm al-sa`at wa'l-`amal biha. Nashara A.Dahman. Dimashq, undated.

"Ibn al-Shatir"

1. The Life and Work of Ibn al-Shatir, an Arab Astronomer of the Fourteenth Century. Ed. by E.S.Kennedy and Imad Ghanem. Aleppo, 1976.

Ibn al-Sikkit (No 62)

1. Kitab al-huruf. al-Qahira. 1961.

Ibn Sina (No 317)

1. Translatio Canticorum Avicennae cum commento Averrhoys. Facto ab Arabico in Latinum a mag. Armeagando Blessi de Montepelusiano. Venetiae, 1484.
2. Avicennae Opera. Venetiis, 1508.
2a. Avicenne liber Canonis medicine cum castigationibus Andree Bellunensis. Romae, 1527; Leiden, 1971.
3. Libri quinque Canonis medicinae Abu Ali Principis filii Sinae alias corruptè Avicennae quibus additi sunt in fine eiusdem libri Logicae, Physicae et Metaphysicae Arabicè nunc primum impressi. Romae, 1593.
4. Risala dar `amal-i jarr-i thaqil. Haydarabad, 1250 h. [1834].
5. Kitab al-shifa. al-Qahira, 1294 h. [1877].
6. Ti`s Rasail fi'l-hikma wa'l-tabi`yyat. Istanbul, 1298 h. [1881]; Bombay, 1318 h. [1900]; al-Qahira, 1326 h. [1908].
7. Avicenne. Traités mystiques. Ed. et trad. par M.A.F.Mehren. 1-4. Leyde, 1889-1899.
8. Hikmat-i `Alai mawsum ba Maya-yi danish. Haydarabad, 1309 h. [1891].
9. Kitâb el-Ichârât. Le livre des theorèmes. Ed. et trad. par J.Forget. Leyde, 1892.

10. Kitab al-shifa. 1-2. Tehran, 1313 h. [1896].
11. Abu-'Aly al-Husayn Ibn 'Abdallah Ibn Syna. A Compendium on the Soul. Transl. by E.Abbot van Dyck. Verona, 1906.
12. Risala fi aqsam al-`ulum al-`aqliyya. Epître sur les parties des sciences intellectuelles. P., 1908.
13. Kitab al-naja. al-Qahira, 1331 h. [1913].
14. Avicennae Metaphysicae compendium. Roma, 1926.
15. Avicennae de congelatione et conglatinatione lapidum, Being Sections of the "Kitâb al Shifâ". Ed. by E.J.Holmyard and D.C.Mandeville. P., 1927.
15a. Introduction à Avicenne, son "Epître des définitions". Trad. avec notes de A.-M. Goichon, préf. de Miguel Asin Palacios. P., 1933.
16. Danish-nama. Ba ihtimam-i A.Khurasani. Tehran, 1315 s. h. [1936].
17. Sab` rasail. Haydarabad. 1356 h. [1937].
18. Fann sama` tabi`i az kitab-i Shifa' az tasnifat-i sharaf al-muluk Shaykh al-Ra'is Abu `Ali Husayn ibn `Abdallah ibn Sina. Tarjama ba farsi Muhammad `Ali Furughi. Tehran, 1316 s. h. [1937].
19. Kitab al-naja. Nashara Muhyi al-Din Sabri al-Kurdi. al-Qahira, 1358 h. [1939].
20. Risala adhawiyya fi amr al-mi`ad. al-Qahira, 1368 h. [1949].
21. Le livre des directives et remarques. Trad. par A.M.Goichon. P.-Beyrouth, 1951.
22. Danish-nama. Ba ihtimam-i M.Mu`in wa S.M.Mishkat. Tehran, 1331 s.h. [1952].
23. Kitab al-shifa'. al-Mantiq. Qiyas. Tasdir Sa`id Zayid. al-Qahira, 1371-1377 h. [1952-1958].
24. Mi`yar al-`aqul. Ba ihtimam-i Jalal al-Din Humai. Tehran, 1331 s.h. [1952].
25. Avicenna's Psychology: An English translation of the Kitab an-Najat. Transl. F.Rahman. L., 1952.
26. Abuali ibni Sino. Majmuai she"rho. Stalinabad, 1953.
27. Chetverostishiya. Per. S.I.Lipkina. - Literaturnyy Tajikistan. 5. Stalinabad, 1953, 128-130.
28. Zhizneopisaniye Abu-Ali Huseyna ibn Abdallaha ibn Siny, rasskazannoye im samim i zapisannoye yego uchenikom Abu-Ubeydom al-Juzjani. Per. M.I.Zanda. - Literaturnyy Taji-kistan, 5. Stalinabad, 1953, 131-145.
29. Abu `Ali-yi Sina. Kurada-yi tabi`iyyat. Ba muqaddima wa hawashi wa tashih-i duktur Ghulam Husayn Sadiqi. Tehran, 1332 s. h. [1953].
30. Kitab al-Qanun fi'l-tibb li-Abu `Ali al-Shaykh al-Ra'is Ibn Sina. Tehran, 1953.
31. Abu Ali Ibn Sina (Avicenna). Kanon vrachebnoy nauki. Per. pod red. V.N.Ternovskogo. 1-5. Tash., 1954-1960.
32. Tib qonunlari. 1-5. Toshkent, 1954-1960.
33. Ibn Sina (Avicenna). Kniha definic. Prekl. J. Stepkova. Praha, 1954.
34. `Uyun al-hikma. Haqaqahi wa qaddama lahu `Abd al-Rahman Badawi. Avicennae Fontes sapientiae. Ed. et prolegomenis instruxit `Abdurrahman Badawi. - "Ibn Sina" [4], 5, 1954.
34a. `Uyun al-hikma. Muqaddima wa tahqiq Mujtaba Minuwi. Tehran, 1373 s.h. [1954].
35. Avicenne. Le livre de science. Trad. par Mohammad Achena et Henri Masse. 1-2. P., 1955-1958; P., 1986.
36. Isharat wa tanbihat. Tashih-i duktur Ihsan-Yar Shatir. Tehran, 1332 s.h. [1953].
37. Psychologie d'Ibn Sina (Avicenne) d'après son ceuvre Aš-Šifa. Ed. J.Bakoš. Prague, 1956.
37a. al-Urğuza fi't-tibb. Poème de medecine. Cantica Avicennae. Texte arabe, traduction française, traduction latine du XIII^e siècle, avec introductions et notes. Etabli et présenté par H.Jahier et A.Noureddin. P., 1956.
38. Kitab al-shifa'. al-Riyadiyyat - Usul al-handasa, al-hisab, Jawami` `ilm al-musiqa, Kitab al-falak. Tasdir A.I.Sabra wa `Abd al-Hamid Lutfi Mazhar wa Zakariya Yusuf. al-Qahira, 1375-1398 h. [1956-1978].
39. Danish-nama - Kniga znaniya. Per. i stat'ya A.M.Bogoutdinova. Stalinabad, 1957.
40. Ibn Sina o sebe. Otryvki iz "Knigi znaniya", "Knigi istseleniya" i "Kanona". Per. M.A.Sal'ye, A.M.Belenitskogo i Yu.N.Zavadovskogo. - "Materialy" [1], 1957, 129-168; "Mate-rialy" [2], 1976, 277-281, 285-300, 305-321.
41. Traktat o razdelenii (klassifikatsii) sushchestvuyushchikh veshchey. Per. M.A.Sal'-ye. - "Materialy" [1], 1957, 169-175; "Materialy " [2], 1976, 281-284.
42. O geologii i mineralogii iz "Knigi istseleniya" ("Kitab al-shifa"). Per. A.M.Be-lenitskogo. - "Materialy" [1], 1957, 169-175; "Materialy" [2], 1976, 300-309.
42a. Diwan Ibn Sina. Akhrajahu Husayn `Ali Mahfuz. Tehran, 1377 s.h. [1957].
43. al-Isharat wa'l-tanbihat. Nashara S.Dunya. al-Qahira, 1378 h. [1958-1959].
44. Isharat wa tanbihat ma` sharh Nasir al-Din al-Tusi. 1-4. al-Qahira, 1377 h. [1958].
45. Avicenna's de Anima (Arabic text), Being the Psychological Part of Kitab al-Schifa, ed. by F.Rahman. Oxford, 1959, 1960.
46. al-Tanbihat wa'l-isharat. al-Qahira, 1380 h. [1960].
47. Kitab al-Shifa'. al-Ilahiyyat. al-Qahira, 1380 h. [1960].
48. O dushe. Ob obrazovanii gor i mineralov. Otryvki iz "Knigi spaseniya" i "Knigi istseleniya". Per. A.V.Saghadeyeva. - "Izbrannyye proizvedeniya" [1], 1961, 219-286.

49. Poemul medicinei Canonul Stiintei [extrare]. Studii introductiv, traducere si uste de G.Bratescu. Bucuresti, 1962.
50. Kitab al-Shifa', al-Tabi'iyyat. Tasdir Ibrahim Madhkur, 'Abd al-Halim Muntasir, Sa'id Zayid, 'Abdallah Isma'il. al-Qahira, 1385-1398 h. [1965-1978].
51. She"rlar. Tarjimon Shaislom Shamuhamedov, nashrga tayyorlovchi A.Irisov. Toshkent, 1965.
52. Matematicheskiye glavy "Knigi znaniya" (Donishnama). Per. B.A.Rozenfel'da i N.A.Sadovskogo, stat'ya i komm. S.U.Umarova i B.A.Rozenfel'da. Dushanbe, 1967.
53. Kniga istseleniya (razdel o muzyke). Per. A.V.Saghadeyeva. - "Muzykal'naya estetika" [1], 1967, 277-284.
54. Avicenna latinus. Liber de anima seu Sextus de Naturalibus. Ed. critique par Simone Van Riet. Louvain - Leiden, 1968, 1972.
55. Abuali Ibni Sino. Risolai jawdiyya. - Sadoi Sharq, 1970, No 1, 116-120.
56. Ibn Sinaning tib haqidagi urjuzasi, tarjima Shoislomovniki. - Shaislamov [1], 1972, 47-188.
56a. Azhawiyya. Tehran, 1351 s.h. [1972].
57. Metafizyka. Ze zbioru pt. ksiega wiedzy. Tlum. Mieczyslaw Gojacz. Warszawa, 1973.
58. The Life of Ibn Sina. A Critical Edition and Annot., Transl. by William E.Gohlman. Albany, 1974.
59. Awicenna. Ksiega wiedzy. Przelozyl, wstepem i przypisami opatrzyl Bogdan Skladanek. Warszawa, 1974.
59a. al-Risala alwahiyya. Tunis, 1975.
59b. Al-Shifa'. Usul al-handasa. Nasharua A.I.Sabra wa A.H.Lutfi. al-Qahira, 1396 h. [1976].
60. Risala fi aqsam al-'ulum al-'aqliyya. Tis' rasail. Nashara J.Qanawati. - MIDEO. 13, 1977, 323-325.
60a. Avicenne. Métaphysique du "Shifa": livres I à V. Trad. française du texte arabe du Caire, introd., notes et commentaires par Georges C. Anawati. P., 1978.
61. Abu Ali ibn Sino. Tib qonunlari. 4-5-kitob. Tarjima qiluvchilar A.Rasulov va A.P.Qayumov. Toshkent, 1980.
62. Awji Zuhal (She"rho). Saturna predel (Stikhi). Dushanbe, 1980.
63. Tatimma al-Najat. Abuali ibn Sino. Dopolneniya k "Knige Spaseniya". Per. H.A.Tarbiyata. Dushanbe, 1980.
64. Ibn Sina (Avitsenna). Izbrannoye. M., 1980.
65. Kanon vrachebnoy nauki. 1-5. Tash., 1980-1982.
66. Ibn Sina (Avitsenna). Izbrannyye filosofskiye proizvedeniya. Per. A.M.Bogoutdinova, M.Dinorshoyeva i dr. M., 1980.
67. Abuali ibni Sino. Osori muntakhab. 1-2. Dushanbe, 1980, 3. Dushanbe, 1985.
67a. Izbrannyye proizvedeniya. 1-2. Dushanbe, 1983.
68. Risala al-adwiyya al-qalbiyya. Avicenna's Tract on Cordial Drugs and Essays on Arab cardiotherapy. Ed. Hakeem Abdul Hameed. New Delhi - Karachi, 1983.
69. Avicenna Latinus. Liber de philosophia prima sive scientia divina. Ed. critique de la trad. latine medievale par S.Van Riet, avec introd. doctrinale de G.Verbeke. Louvain-Leiden, 1983.
69a. Epître sur les parties des sciences intellectuelles. Trad. R.Mimoune. - "Ibn Sina" [17], 1984, 143-151.
70. Maqala fi ittikhadh al-alat al-rasadiyya. - ZGAIW. 2, 1985, arab. 48-62.
71. Avicenna Latinus. Liber tertius naturalium de generatione et corruptione. Ed. critique de la trad. latine medievale par S. Van Riet, avec introd. doctrinale de G.Verbeke. Leiden-Louvain, 1987.

"Ibn Sina" (memorial collections)

1. Büyük Türk Filozof ve Tıb Üstadı Ibni Sinâ Şahsiyeti ve Eserleri Hakkında Tetkikler. - TTKY (7). 1937, No 1.
2. Millénaire d'Avicenne (Abou Ali ibn Sina). - La Revue de Caire. 27, 1951, No 141.
3. Avicenna: Scientist and Philosopher (Millenary Symposium). Ed. G.M.Wickens. L., 1952; Ann Arbor, 1983.
4. Memorial Avicenne. 1-5. La Haye - Le Caire, 1952-1954.
5. Ibn Sina. Materialy nauchnoy sessii AN Uzb. SSR, posvyashchennoy 1000-letnemu yubileyu Ibn Siny. - Trudy Instituta Vostokovedediya AN Uzb. SSR. I. Tash., 1953.
5a. Jashn-nama-yi Ibn-i Sina. Le livre de millenaire d'Avicenne. 2. Tehran, 1334 s. h. - 1374 h. [1955].
6. Avicenna Commemoration Volume. Calcutta, 1956.
7. Avicenna nella storia della cultura medioevale. Relationi e discussioni (15 aprile 1955). Roma, 1957.
8. Abu Ali Ibn Sina. K 1000-letiyu so dnya rozhdeniya. Pod red. M.B.Baratova, P.G.Bulgakova i U.I.Karimova. Tash., 1980.
9. Abu Ali ibn Sino. Tughilgan kunining 1000-yilligiga. Tahrir hay"ati: M.B.Baratov, U.I.Karimov va A.Irisov. Toshkent 1980.
10. Abu Ali ibn Sina - vydayushchiysya vrach, uchonyy, entsiklopedist. Tash., 1980.
11. Abuali ibn Sina i yego epokha. Dushanbe, 1980.
12. Avicenna/Ibn Sina. I. Probleme der Philosophie. II. Wissenschaftsgeschichte. Her-ausg. B.Brentjes. Halle a/S, 1980.

13. The 1000th Anniversary of Ibn Sina's Birth (Avicenna). XVIth International Congress of the History of Science (Bucharest, 1981). Moscow, 1981.
14. Matematika i astronomiya v trudakh Ibn Siny, yego sovremennikov i posledovateley. Tash., 1981.
15. Abu Ali ibn Sina i yestestvennyye nauki. Materialy yubileynoy nauchnoy sessii, po-svyashchennoy 1000-letiyu Abu Ali ibn Siny [Avitsenny]. (Bukhara, 24-26 sentyabrya 1980 g.) Tash., 1981.
16. Ibn Sina i srednevekovaya filosofiya. Dushanbe, 1981.
17. Etudes sur Avicenne. Ed. J.Jolivet et R.Rashed. P., 1984.
18. Ibn Sînâ. Ölümünün bininci yılı Armağanı 1984'ten ayrı basım. - TTKB. 48, 1964.

Ibn Sina (No 317), Khayyam (No 420) and others

1. Jami` al-badai` yakhtawi `ala 19 risala Ibn Sina wa `Umar Khayyam wa ghayri-huma. al-Qahira, 1335 h. [1917].

Ibn Sinan (No 174)

1. Rasail Ibn Sinan. Haydarabad, 1367 h. [1948].
2. Kniga o postroyenii tryokh [konicheskikh] secheniy. Per. J.al-Dabbakha i S.A.Krasnovoy, prim. S.A.Krasnovoy. - IMI. 16, 1965, 427-436.
3. Risala Ibn Sinan ibn Thabit ibn Qurra al-Harrani fi'l-ma`ani allati istakhrajahi fi'l-handasa wa'l-nujum. Studia Arabica et Islamica. Festschrift for Ihsan `Abbas. Beirut, 1981.
4. Rasail Ibn Sinan. Haqahaqa duktur Ahmad Salim Sa`idan. al-Kuwayt, 1403 h. The Works of Ibrahim ibn Sinan. Ed. A.S.Saidan. Kuwait, 1983.

Ibn al-Sura (No 458)

1. Ibn as-Salah. Zur Kritik des Koordinatenüberlieferung im Sternkatalog des Almagest, arabischer Text nebst deutschen Übersetzung, Einleitung und Anhang, herausg. von P.Kunitzsch. - Abhandl. der Akad. der Wiss. in Göttingen, phil.-hist. Klasse. 3. 1975, No 94.

Ibn Tayfur, Ahmad ibn Abu Tahir (819-883)

1. Sechster Band des Kitab Bagdad von Ahmad ibn abi Tahir Taifur. Herausg. und übers. H.Keller. I. Arabischer Text. Lpz., 1908.

Ibn Turk (No 59)

1. Neobhodimosti v sostavnykh uravneniyakh. Iz knigi "Algebra i almukabala". Per. i prim. A.K.Tagi-zade. - TNKA XIV(m). 1971, 26-41.

Ibn Tufayl (No 494)

1. Philosophus, Autodidactus, sive Epistola Abi Jaafar Ebn Tophail de Hai Ebn Yok-dhan, in quo ostenditur quomodo ex inferiarum contemplatione ad superiorum notitiam ratio humana adscendere possit. Ex arabica in lingua Latinam versa ab Eduardo Pocockio, Oxonii, 1671, 1700.

1a. The Improvement of Human Reason Exhibited in the Life of Hai Ebn Yokdhan. Newly Translated from the Original Arabick by Simon Ockley. L., 1708; Hildesheim, 1983.

2. Hayy ben [bin] Yakdhân. Roman philosophique d'Ibn Thofail. Trad. de Leon Gauthier. Alger, 1900; Beyrouth, 1936; 1981. P., 1983.
3. Qissa Hayy ibn Yakzan. Dimashq, 1935.
4. Roman o Haye, syne Yakzana. Per. I.P.Kuz'mina, pod red. I.Yu.Krachkovskogo. Petrograd, 1920; "Izbrannye proizvedeniya" [1], 1961, 329-394.
5. Povest' o Haye, syne Yakzana. Per., vstup. stat'ya i komm. A.V.Saghadeyeva, M., 1988.

Ibn al-Ukhuwwa (No 679)

1. Ma`alim al-qu`la fi ahkam al-hisba. Eg with English summary by Reuben Levy. L., 1938.

Ibn Yunis (No 283)

1. Le Livre de la grande Table Hakemite. Extraits du Ms de Leyde, par Ebn Iounis. Ed. et trad. par J.J.Caussin de Parseval. - NEM. 7. P., XII [1801], 16-240.
2. `Amal thuraya yuqadu fiha ithna `ashar qandilan. Nashara L.Shaykhu. - al-Mashriq, 17, 1914, 398.

Ibn Zabardast Khan (No 1266)

1. The Faras-namah of [Ibn] Zabardast Khan. Ed. with English Notes by Lieut.-Colonel D.C.Phillot. Calcutta, 1911.

Ibrahim, Tawfiq Kamel

1. Atomistika Islama i yeyo mesto v srednevekovoy arabo-musul'manskoy filosofii. - ADK (fs). M., 1978.

Id, Yusif

1. An Analemma Construction for Right and Oblique Ascensions. - The Mathematics Teacher. 62, 1969, No 8, 669-672; "Kennedy" [1], 1983, 495-498.

Ideatullin, Mazghut

1. Opisaniye rukopisey Nauchnoy biblioteki im. N.I.Lobachevskogo. 16. Arabskiye rukopisi po astronomii i matematike. Kazan', 1983.

Ideler, Ludwig (1766-1846)

1. Untersuchungen über den Ursprung und die Bedeutung der Sternnamen. B., 1809; Ausgabe von Fuat Sezgin. F.M., 1994.
2. Handbuch der mathematischen und technischen Chronologie. 1-2. B., 1825-1826.

al-Idrisi (No 470)

1. Kitab Nuzhat al-Mushtaq. Roma, 1592; re-ed. by Fuat Sezgin. F.M., 1992.
2. Géographie d'Edrisi, traduit de l'arabe en français d'après deux manuscripts de la Bibliothèque du Roi et accompagnées de notes par P.A.Jaubert. 1-2. P., 1836-1840; ré-éd. par Fuat Sezgin. F.M., 1992.
3. Opus Geographicum, under the Direction of the Istituto Oriental di Napoli. Leiden. 1970; Amsterdam, 1975.
4. Uns al-muhaj wa-rawd al-furaj. The Entertainment of Hearts, and Meadows of Contemplation. With Introduction in Arabic and English by Fuat Sezgin. F.M., 1984.
5. Compendium of the Properties of Diverse Plants and Various Kinds of Simple Drugs. Kitab al-jami' li-sifat ashtat al-nabat wa-durub anwa' al-ufradat. With introduction in Arabic and English by Fuat Sezgin. F.M., 1995.

Ignatenko, Aleksandr Aleksandrovich

1. Ibn-Khal'dun. M., 1981.
2. Ibn-Khal'dun o pripode gosudarstva. - Narody Azii i Afriki. 1981, No 1, 93-99.
3. Ibn Khaldun on the Nature of the State. - Muslim Philosophy in Soviet Studies. New Delhi, 1981, 70-77.
4. Ibn Khaldun. al-Qahira, 1986.
5. Ibn Khaldun: hawl tabi'a al-dawla. - "al-Turath al-falsafi", 1987, 85-90.
6. Problemy razvitiya arabo-musul'manskoy obshchestvenno-politicheskoy mysli sredne-vekov'ya. Metodologicheskiy aspekt. - Metodologicheskiye problemy istorii filosofii zarubezh-nogo Vostoka. M., 1987, 155-181.
7. V poiskakh schast'ya: obshchestvenno-politicheskiye vozzreniya arabo-islamskikh fi-losofov srednevekov'ya. M., 1989.
8. Obshchestvenno-politicheskiye vzglyady arabo-islamskikh filosofov srednevekov'ya (IX-XV vv.). - ADD (fs). M., 1989.

İhsanoğlu, Ekmeleddin (b. 1943)

1. Başhoca İshak Efendi: Türkiyede Modern Bilimin Öncüsü. Chief Instructor Ishak Efendi: Pioneer of Modern Science in Turkey. Ankara, 1989.
2. İbni Sina ve el-Kimya Hakkındaki Görüşleri ile İlgili Yeni bir Değerlendirme. - Uluslararası İbni Sina Sempozyumu Bildirileri (17-20 Ağustos 1983, Ankara). Ankara, 1984, 105-116
3. Some Remarks on Ottoman Science and Its Relation to European Science and Technology up to the End of the Eighteenth Century. - Proc. of the Internat. Congress Transfer of the Science and Technology (1-5 June 1991, Amsterdam). - J. of the Japan-Netherlands Institute. 3, 1991, 45-73.
4. Ottoman Science in the Classical Period and Early Contacts with European Science. - Transfer of Modern Science and Technology in the Muslim World. - Proc. of the Internat. Symposium on Modern Science and Muslim World, Istanbul, 1992, 1-48.
5. Introduction of Western Science to the Ottoman World. A Case Study of Modern Astronomy (1660-1860). - Transfer of Modern Science and Technology in the Muslim World. - Proc. of the Internat. Symposium on Modern Science and Muslim World, Istanbul, 1992, 67-120.
6. Ottomans and European Science. - "Sciences and Empires". Dordrecht, 1992, 37-48.
7. Ottoman Science. - ENWC. 1997, 799-804.
8. Ottoman Transfer of European Science and Technology and its Effects on Military and Industrial Modernization (18^{th}-19^{th} Centuries). - ACIHS XX, 1997, 75.
9. Ottoman Educational and Scholarly-Scientific Institutions.-HOSSC, 2, 2002, 361-518.

10. The Ottoman Scientific-Scholarly Literature.- HOSSC, 2, 2002, 361-519-606.
11. "Science in the Ottoman Empire", The Different Aspects of Islamic Culture, Volume IV, Part II Science and Technology in Islam, UNESCO 2001, p. 565-592
12. Biographical Dictionary- Sullam al-Vusul ila Tabakat al Fuhul li-Katib Çelebi (in print).
13. "Risala al-Sayh Abi Ali al-Husayn b. Abdallah b. Sina al-Buhari radıyallahu anhu ila Abi Abdallah al-Barki fi İlm al-San'a Jawaban li-Sualihi fi'l-Ma'na", İbni Sina ve el-Kimya Hakkındaki Görüşleri ile İlgili Yeni Bir Değerlendirme. - Uluslararası İbni Sina Sempozyumu Bildirileri (17-20 Ağustos 1983, Ankara). Ankara, 1984, 105-116.

İhsanoğlu, E.,Şeşen, R., İzgi, C., Akpınar, C., and Fazlıoğlu, İ.

1. Osmanlı Astronomi Literatürü Tarihi. Istanbul, 1997 (OALT).
2. Osmanlı Matematik Literatürü Tarihi. Istanbul, 1998 (OMLT).

İhsanoğlu, E. Şeşen, R., Bekar M. S., Gündüz. G., Furat. A.H.

1 [3]- OCLT – Osmanlı Coğrafya Literatürü Tarihi. İstanbul. 2000 (OCLT)

İhsanoğlu, E., Şeşen, R., Bekar M. S., Gündüz, G.

1[4]- OMULT - Osmanlı Musiki Literatürü Tarihi. İstanbul 2003 (OMULT).

Ikhwan al-Safa (No 226)

1. Der Streit zwischen Mensch und Thier, ein arabisches Mährchen aus den Schriften der Lauteren Brüder. Übers. von F.Dieterici. B., 1858.
2. Ikhwân al-Safâ'. Dispute between Men and Animals. Transl . J.Platts. L., 1869.
3. Die Abhandlungen der Ichwân es-Safâ in Auswahl, zum ersten Mal aus arabischen Handschriften herausg. von F.Dieterici. Lpz., 1883.
4. Rasail Ikhwan al-Safa. Bombay, 1303-1306 h. [1886-1889].
5. Rasail Ikhwan al-Safa. al-Qahira, 1347 h. [1928].
6. Rasail Ikhwan al-Safa. 1-4. Beirut, 1377 h. [1957].
7. Fragmenty iz "Poslaniy". Per. K.B.Starkovoy. - "Izbrannye proizvedeniya" [1], 1961, 137-160.
8. Poslaniye o muzyke. Per. A.V.Saghadeyeva. - "Muzykal'naya estetika" [1], 1967, 262-276.

Iljas, Mohammad

1. Qibla and Islamic Prayer Times. - ENWC. 1997, 834-836.

`Inan, Z.

1. Ba`d al-makhtutat al-`arabiyya fi Dar al-kutub al-Yamaniyya bi-San`a'. - MMMA. 25, 1979, 13-27.

`Inayatallah, Muhammad

1. Tadhkira-yi Abu Rayhan Biruni. Aghra, 1893.

Inoghomjonova [Inagamjanova], F.

1. Abu Ali Sinoning "Musiqiy bilimlar tuplami" asari. - "Ibn Sina" [9], 1980, 145-150.

Iqbal, `Abbas (1897-1956)

1. `Umar Khayyam. - Sharq. Murdad 1310 s.h. [July-August 1931], 466-485.
2. Khanadan-i Nawbakht. Tehran, 1311 s.h. [1932].
3. Mirza Sayyid Ja`far-Khan Mushir al-Dawla. - Yadgar. 2, 1324 s.h. [1948], No 6, 44-50.

`Iraqi, Mujtaba

1. Fihrist-i kitabkhana-yi mubaraka-yi Madrasa-yi Faydiyya dar Qumm. 1-2. Qumm, 1337-1338 s.h. [1958-1959].

Irani, Rida A. K.

1. A Sexagesimal Multiplication Table in the Arabic Alphabetic System. - Scripta Mathematica. 18, 1952, 92-93; "Kennedy" [1], 1983, 511-512.
2. Arabic Numeral Forms. - Centaurus. 4, 1955, 1-12; "Kennedy" [1], 1983, 710-721.
3. The Jadwal at-takwim of Habash al-Hasib. Master Dissertation. American University of Beirut. Beirut, 1956.

al-Irbili (No 892)

1. Jawahir al-nizam fi ma`rifa al-in`am. Bi-nashra Luis Shaykhu al-yisu`i. Un traité inedit sur la musique par Chams al-Din al-Irbili. Ed. par Père Louis Cheikho. - al-Mashriq. 1913, No 12, 895-901.

Irisov, Abdusodiq Iris ughli

1. Ulugh tabib wa olim Abu Ali ibn Sino (hayoti wa ilmiy faoliyati). Toshkent, 1960.
2. Aburayhon Biruniy. Toshkent, 1960.
3. Khorazmiy wa Forobiy. Toshkent, 1961.
4. Ibn Sina - ma"rifat parwar adib. Toshkent, 1962.
5. Beruniy wa Hindiston. Toshkent, 1963.
6. Suz boshi. - al-Biruni [27], 1965, 7-21.
7. Forobiy wa Ibn Sina. - ONU. 1973, No 6, 71-72
8. Beruniy "Hindiston". - al-Biruni [8], 1973, 130-135.
9. Mineralogiya al-Kindi v proizvedeniyakh Beruni. - ONU. 1973, No 7-8, 100-102.
10. Forobiy adib. Toshkent, 1975.
11. Abu Ali ibn Sino hayoti wa ijodiy merosi. Toshkent, 1980.
12. Aristotel' wa Abu Ali ibn Sino "Poetika" siga doir. - Ibn Sina [9], 1980, 151-172.

Irisov, A., Nosirov, A., and I. Nizomuddinov

1. Urta Osiyo qirq olim. Toshkent, 1961.

Irmischer, J. C.

1. Handschriften-Katalog der königlichen Universitätsbibliothek in Erlangen. 5. Arabische, türkische und persische Manuscripte. F.M. - Erlangen, 1852; "Handschriften" [2], 3, 1987, 19-38.

al-Isfahani, Hamza (No 196)

1. Hamzae Isfahanensis Annalium libri X. Ed. et rec. M.E.Gottwald. Petropoli - Lipsiae, 1844-1848.

Ishaq Efendi (No 1407)

1. Majmu` usul riyadiyya. Qazan, 1247 h. [1831].
2. Ajsam nariyya wa muthallathat kuriyya. Istanbul, 1250 h. [1834].

Iskander, Albert Zaki [Iskandar, Albirt Zaqi]

1. al-Razi al-tabib al-ikliniki, nusus min makhtutat lam yasbiq nashruha. - al-Mashriq. 54, 1962, 216-282.
2. Ibn Rushd. - DSB. 12, 1975, 1-9.
3. Risala li'l-Biruni fi Fihrist kutub Muhammad B. Zakariyya Al-Razi. - "al-Biruni" [12] II, 1976, 379-393.
4. Hunayn ibn Ishaq. - ENWC. 1997, 399-400.
5. Ibn Ridwan. - ENWC. 1997, 429-430.
6. Ibn Rushd. - ENWC. 1997, 431-432.
7. Al-Razi. - ENWC. 1997, 850-852.

"Islamic Geography"

1. General Outlines of Islamic Geography. Collection of Papers Re-edited by Fuat Sezgin. F.M., 1992.

al-Istakhri (No 213)

1. Das Buch der Länder von Schech Ebu Ishak el Farsi el Isztachri. Aus dem Arabischen übersetzt von A.D.Mortdmann. Nebst einem Vorworte von C.Ritter. Hamburg, 1845; Ausgabe von Fuat Sezgin. F.M., 1995.
2. Viae regnorum. Descriptio ditionis moslemicae auctore Abu Ishak al-Farisi al-Istakhri [Kitab masalik al-mamalik]. Ed. M.J. de Goeje. Lugduni Batavorum, 1870; re-ed. Fuat Sezgin. F.M., 1992.

"Istoriya"

1. Istoriya khalifov anonimnogo avtora XI veka. Faksimile rukopisi, predisloviye i stat'ya P.A.Gryaznevicha. M., 1967.
2. Istoriya matematiki s drevneyshikh vremyon do nachala XIX stoletiya. Pod red. A.P.Yushkevicha. 1. M., 1970.
3. Ta'rikh-i Sistan (Istoriya Sistana). Per. i komm. L.P.Smirnovoy. M., 1974.

I'tisami, Yusuf

1. Fihrist-i kitabkhana-yi Majlis-i Shawra-yi Milli. 1-2. Tehran 1305-1311 s.h. [1926-1933].

Ivanov, Anzor Samsononich

1. Ucheniye al'-Farabi o poznavatel'nykh sposobnostyakh cheloveka. ADK(fs). AlmaAta, 1972; Alma-ata, 1977; "al-Farabi" [2], 1975, 145-150.

Ivanov, Wladimir

1. Concise Descriptive Catalogue of the Persian Manuscripts in the Collection of the Asiatic Society of Bengal. Calcutta, 1924. First Supplement. Calcutta. 1927. Second Supplement. Calcutta. 1928.
2. Concise Descriptive Catalogue of the Persian Manuscripts in the Curzon Collection. Calcutta, 1926.
3. Nasir-i Khusraw and Ismailism. Bombay - Leiden, 1948.

Ivry, Alfred L.

1. Islamic and Greek Influence on Maimonides' Philosophy. - "Maimonides" [2], 1986, 139-156.
2. Averroes' Middle and Long Commentaries on the "De Anima". - ASP. 5, 1995, No 1, 75-92.

"Izbrannyye proizvedeniya"

1. Izbrannyye proizvedeniya mysliteley stran Blizhnego i Srednego Vostoka IX-XIV vv. Sbornik statey pod red. S.N.Grigoryana. M., 1961.

"Iz filosofskogo naslediya"

1. Iz filosofskogo naslediya narodov Blizhnego i Srednego Vostoka. Sbornik statey pod red. I.M.Muminova i M.M.Khayrullayeva. Tash., 1972.

"Iz istorii"

1. Iz istorii ep pokhi Ulugbeka. Sbornik statey pod red. A.K.Arendsa. Tash., 1965.
2. Iz istorii tochnykh nauk na srednevekovom Blijhnem i Srednem Vostoke. Sbornik statey pod red. S.H.Sirajdinova. Tash., 1972.
3. Iz istorii nauki epokhi Ulugbeka. Sbornik statey pod red. S.H.Sirajdinova. Tash., 1979.
4. Iz istorii srednevekovoy vostochnoy matematiki i astronomii. Otv. red. S.H.Siraj-dinov. Tash., 1983.
5. Iz istorii kul'turnykh svyazey narodov Sredney Azii i Indii. Red.: M.M.Khayrullayev, P.G Bulgakov, U.M.Aripov, I.M.Hashimov. Tash., 1986.

Izmaylova, Tat'yana Alekseyevna

1. Avitsenna (k 1000-letiyu so dnya rozhdeniya). Lg., 1952.

Izzidien, Yousif

1. Arabic Manuscripts in the National Library of Sofia "St. Cyril and Methodius". Baghdad, 1968.

al-Jabarti, `Abd al-Rahman (No 1381)

1. `Aja'ib al-athar fi'l-tarajim wa'l-akhbar. al-Qahira. 1-4. 1297 h. [1880].
2. Udivitel'naya istoriya proshlogo v zhizneopisaniyah i khronike sobytiy.
3. Per. L.M. Fil'shtinskogo. M., 1962.
4. Per. Kh.I.Kil'berg. M., 1963.

Jabre, Farid

1. La notion de certitude selon Ghazali. P., 1958.
2. La notion la ma'rifa chez Ghazali. Beyrouth, 1968.

al-Jaburi, `Abdallah

1.al-Mustadrak `ala'l-kashshaf `an makhtutat khazain kutub al-awqaf. Baghdad, 1385 h. [1965].

al-Jaburi, Jamal

1. al-Mu`allim ath-thani. - "al-Farabi" [3], 1975, 79-88.

Jackson, A. V. W. and Yohannan, A.

1. A Catalogue of the Collection of Persian Manuscripts, also including some Turkish and Arabic; Presented to the Metropolitan Museum of Art, New York, by Alexander Smith Cochran. N.Y., 1914.

Jacob, Georg and Wiedemann, E.

1. Zu `Omer-i-Chajjam. - Der Islam. 3, 1912, 42-62; Wiedemann [208], II, 679-699.

Jacquart, Danielle

1. Ibn Masawaih Yuhanna. - ENWC. 1997, 424-425.

Jafri, S. Razia

1. Introduction and Interpretation of the map. Vvedeniye i interpretatsiya karty. - Jafri and Mal'tsev [1], 1985, 57-76.
2. Al-Khwarazmi's Map of the World. - Jafri and Mal'tsev [1], 1985, 77-116.

Jafri, S. R. and Mal'tsev, Yu, S.

1. Al-Khwarazmi's Geographical Map of the World Based on the Book "Surat al-ard". Geograficheskaya karta mira al-Khorezmi po knige "Surat al-arz". Dushanbe-Šrinagar, 1985.

Jahid, Ali Muhamed Reza

1. Abu Nasr al'-Farabi o gosudarstve. Dushanbe, 1966.

al-Jahiz (No 76)

1. Le livre des Avares. Publ. par G. van Vloten. Leyde, 1900.
2. Tria opuscula auctore `Amr ibn Bahr al-Djahiz Basrensi. Ed. G. van Vloten. Leyde, 1903.
3. Kitab al-hayawan. Nashara `Abd al-Samad Harun. 1-7. al-Qahira, 1323-1324 h. [1905-1906]; 1357-1364 h. [1938-1945].
4. Majmu` al-rasail. al-Qahira, 1324 h. [1905].
5. al-Bayan wa'l-tabyin. Nashara Sandubi. 1-3. al-Qahira, 1345-1346 h. [1926-1927].
6. Thalath rasail. Nashara Finkil. al-Qahira, 1345 h. [1926].
7. Rasail al-Jahiz. Nashara Sandubi. al-Qahira, 1352 h. [1933].
8. Majmu` rasail. Nasharu B.Kraus wa T.Hajiri. al-Qahira, 1362 h. [1943].
9. Kitab al-Bukhala. Nashara T. Hajiri. al-Qahira, 1367 h. [1948].
10. Livre de mulets. Êd. avec notes par Ch.Pellat. Le Caire, 1955.
10a. Kitab al-Tarbi' wa'l-Tadwir. Éd. Ch.Pellat. Damas, 1955.
10b. Rasail al-Jahiz. Nashara `A. M. Harun. 1-2. al-Qahira, 1385 h. [1965].
11. Abu Osman Amr al'-Basri al'-Jahiz. Kniga o skupykh. Per. Kh.K.Baranova. M., 1965; - Kniga o skupykh. Ibn Abd Rabbihi. Chudesnoye ozherel'ye. M., 1985, 3-224.
12. Le Kitab al-tarbi` wa"l-tadwir d'al-Ğahiz. - Arabica. 13, 1966, No 3, 268-294; 14, 1967, No 1, 32-59, No 2, 167-190, No 3, 298-319.
13. Kitab al-hayawan. Haqaqahi wa qaddama lahu al-Mahami Fawzi `Utwi. Dimashq, 1387 h. [1968].
14. Kitab al-taj fi akhlaq al-muluq. Êd. et trad. par Ch.Pellat. Le Caire. 1070.
15. Mukhtarat min athar. Baghdad, 1400 h. [1980].

al-Jalabi, Dawud

1. Makhtutat al-Mawsil. Baghdad, 1346 h. [1927].

Jalalov [Jalolov], Giyas [Giyos, Ghiyath] Jalal ughli (1903-1984)

1. Sekstant kak glavnyy instrument observatorii Ulugbeka. - Astronomicheskiy zhurnal. 24, 1947, No 4, 219-253.
2. Biruni i astronomicheskaya nauka. - "al-Biruni" [2], 1950. 63-84.
3. Biruni i kartoghrafiya. - IAN Uz. SSR. 1950, No 1, 28-33.
4. Abu Rayhon Beruniy. Toshkent, 1950.
4a. Biruniy va astronomiya fani. - "al-Biruni" [3], 1950, 77-97.
5. Beruniy va kartoghafiya. - "al-Biruni" [3], 1950, 98-104.
6. K voprosu o sostavlenii planetnykh tablits Samarkandskoy observatorii. - IAI. 1, 1955, 101-118.
7. Otlichiye "Zija Guragoni" ot drugikh zijey. - IAI. 1, 1955, 85-100.
8. Gijas ad-Din Chusti (Kashi) - krupneyshiy astronom i matematik XV veka. - Uch. Zap. Tashkent. gos. ped. instituta. 7, 1957, 141-157.
9. G.D.Gialalov. Lavori di Biruni nel campo dell' astronomia. - ACIHS VIII (Firenze, 1956). 1958, 3-7.
10. Nekotoryye zamechatel'nyye vyskazyvaniya astronomov Samarkandskoy observa-torii. - IAI. 4, 1958, 381-386.
11. Indiyskaya astronomiya v knige Biruni "Indiya". - IAI. 8, 1962, 195-220.
12. Astronomicheskiye voprosy v knige Biruni "Istoriya Indii". - Voprosy istorii fiz.-mat. nauk. M., 1963, 468-471.
13. Abu Ali ibn Sinoning "al-Hisob" nomli asari. - "Ibn Sina" [9], 1980, 122-134.

Jalalova, Zumrad Giyas qizi
1. Quyosh avji urniini belgilashda Beruniy metodi. - Sovet maktabi. 1973, No 9, 29-31.
2. Ucheniye al-Biruni o dvizhenii Solntsa. - IAI. 12, 1975, 226-236.

Jalilova, Rano Pulat qizi
1. Astronomicheskiy traktat al-Kharaki. - ONU. 1984, No 3, 42-44.

Jamal al-Din, M.
1. `Abbas ibn Firnas - awwal raid andalusi li'l-tayyaran. - Mawrid. 6, 1977, No 4, 92-98.

al-Jami (No 826)
1. Muhammad ibn Shaykh Muhammad Rabhami. Riyad al-nasihin. Bombay, 1313 h. [1896]; 1319 h. [1901].
2. Riyad al-nasihin. Istanbul, 1318 h. [1900].

Jami (No 882)
1. Salaman and Absal. Transl. by E.Fitzgerald. Cambridge, 1904.
2. Kulliyat. Tashkand, 1907.
3. Izbrannoye. M., 1955.
4. Traktat o muzyke. Tash., 1960.
5. Asarhoi muntakhab. 1-5. Dushanbe, 1964.
6. Salaman and Absal. Transl. by A.J.Arberry. Cambridge, 1966.
7. Yusuf i Zulaykha. M., 1964.
8. Salaman i Absal. M., 1967.
9. The Precious Pearl. Albany, 1979.

"Jami" (memorial collection)
1. "A.Jami". Sbornik statey. Dushanbe, 1965.

Jami`an, Fuad
1. Mizan al-hikma li-Abi'l-Fath `Abd al-Rahman ibn al-Mansur al-Khazini. al-Qahira, 1367 h. [1948].

"al-Jam`iyya al-Misriyya"
1. al-Jam`iyya al-Misriyya li-ta'rikh al-`ulum. No 2. `Adad khas `an ta'rikh al-ulum wa yashmal al-muhadarat al-tidhkariyya li-Ibn al-Haytham wa ta'rikh hay'a ba`d al-`ulama al-mu`asirin. al-Qahira, 1358 h. [1939].

Jan, Inamullah
1. Comments on Tahdid nihaya al-amakin li tashih masafah al-masakin. - "al-Biruni" [9], 1979, 518-523.

Janibekov, Velkeldi
1. Farabi jane muzyka. - Bilim jane engbek. 1968, No 7, 24-25.
2. O matematicheskoy teorii muzyki al'-Farabi. - Materialy XXII nauchnoy konf. prof. sostava Kazakh. gos. ped. Instituta. Alma-ata, 1969, 106-108.
3. Naturfilosofskiye vozzreniya al'-Farabi. -IAN Kazakh. SSR, ser. obshch. nauk. 1971, No 3, 60-62.
4. Fizicheskiye vozzreniya al'-Farabi. - TNKA XIII (f). 1971, 90-93.
5. Fizika al'-Farabi. ADK(fm). Alma-ata, 1973.
6. Muzykal'naya akustika u al'-Farabi. - ACIHS XIII (M., 1971). 3-4, 1974, 177-180.

Janin, Louis (1897-1978)
1. Le cadran solaire de la Mosquée Umayyade de Damas. - Centaurus. 16, 1971, 285-298.
2. Un texte d'ar-Rudani sur l'astrolabe sphérique. - Annali dell'Istituto e Museo di della Scienza di Firenze. 3. 1978, 71-75.

Janin, L. and King, D.A.
1. Ibn al-Shatir's Sanduq al-Yawaqit: an astronomical "Compendium". - JHAS. 1, No 2, 1977, 187-256; King [34], 1987, 146-215.

Janmatova [Jonmatova], Khalida Iris qizi
1. al'-Kindi i yego nauchnoye naslediye. - ONU. 1971, No 3, 76-78.
2. O filosofskikh vzglyadakh al'-Kindi. - ONU. 1971, No 11, 23-29. Al'-Kindi i yego filosofskiye vzglyady. ADK(fs). Tash., 1971.

3. Al'-Kindi. - "Iz filosofskogo naslediya" [1], 1072, 12-56.
4. Abu Nasr Forobiyning "Masalalar buloghi" risolasi. - ONU. 1973, No 6, 83-85.
5. Abu Ali ibn Sinoning akhloq haqidagi asarlari wa akhloqiv qarashlari. - "Ibn Sina" [9], 1980, 79-87.

Jaouiche [Jawish], Khalil

1. De la fécondité mathématique: d'Omar Khayyam à G.Saccheri. - Diogène. 1967. No 57, 97-113.
2. Le livre de Qarastun de Tabit ibn Qurra. Étude sur l'origine de la notion de travail et du calcul du moment statique d'une barre homogène. - AHES. 13, 1974, 325-347; Leiden, 1976.
3. L'analyse et la synthèse dans les mathématiques arabo-islamiques: le livre d'Ibn al-Haytham. - "al-Multaqi" [1], 1986, 12-14.
4. La théorie des parallèles en pays d'Islam. Contribution à la préhistoire des géométries non-euclidiennes. P., 1986.
5. Kushiyar b. Labban. - EI². 5, 1986, 527.

Jariqbayev, Qubiqul Bozay uly

1. Al-Farabi. Bibliografiyalyq körsetkish. Al'-Farabi. Bobliograficheskiy ukazatel'. Al-maty, 1977.

Jaritz, G.

1. al-Jazari [Ibn al-Razzaz]. - LM. 5, 1990, 310.

Javaher [Jawahir], Kelam Abdol-Aziz

1. Catalogue of Persian and Arabic Manuscripts of the Public Library of the Ministry of Education. Tehran. 1-2. 1313-1314 s.h. [1934-1936].

al-Jawbari (No 617)

1. Kitab al-mukhtar fi kashf al-asrar wa hatk al-astar. Dimashq, 1302 h. [1885]; al-Qahira, 1316 h. [1898].

al-Jawnpuri (No 1417)

1. A Book Styled Jamy Bahadur Khanee Containing Four Sciences of Mathematics, that is Geometry, Optics, Arithmetics, and Astronomy, dedicated to Rajah Khan Bahadur Khan Dalaour Jung. Calcutta, 1835.

Jawtyqov, Orymbek Ahmetbek uly (1911-1989)

1. Al-Farabi-vydayushchiysya predstavitel' tochnogo yestestvoznaniya v srednevekov'ye. - Vesthnik AN Kazakh. SSR. 1975, No 9, 20-29; "al-Farabi" [4], 1975, 41-42.

Jawtyqov, O. A., Mashanov, A. J., Qasymjanov A. Kh., and Kubesov, A.

1. Rol' al'-Farabi v razvitii nauki. - ACIHS XIII (M., 1971). Kollokvium: Sredne-vekovaya nauka. 1971; M., 1974, 51-53.
2. Al-Farabi's role in the Development of Science. - ACIHS XIII (M., 1971). Colloquium: Medieval Science, 1971.

Jay Singh (No 1322)

1. Jaya Simha. Yantrarajakarika. Ed. Kedaranatha. - The Pandit. Jaipur, 1924, No 2; Rajasthana Puratana Granhamala, Jayapura. 5, 1953.
2. Jaya Simha. Yantrarajakarika. Transl. A.F.Garrett. - The Pandit. Jaipur, 1924, No 3.
3. Maharaja Jaya Simha. Yantrarajaracana. Jaipur, 1982.

al-Jazari (No 563)

1. The Book of Knowledge of Ingenious Mechanical Devices. Transl. with Notes by D.R.Hill. Dordrecht - Boston, 1974.
2. A Compendium on the Theory and Practice of the Mechanical Arts. Ed. by A.Y.Hassan. The Arabic Text of al-Jazari's al-Jami` bayna al-`ilm wa'l-`amal al-nafi` fi sina`a al-hiyal li-Abi'l-`Izz ibn Isma`il al-Razzaz al-Jazari. Aleppo - Halab, 1979.

al-Jazuli (No 1083)

1. `Abd al-Rahman al-Susi al-Jazuli. Qatf al-anwar. Fas, undated.

Jensen, Claus

1. The Lunar Theories of al-Baghdadi. - AHES. 8, 1972, 321-328.

2. Abu Nasr Mansur's Approach to Spherical Astronomy as Developed in His Treatise "The Table of Minutes". - Centaurus. 16, 1972, 1-19.

Jolivet, Jean

1. L'intellecte selon al-Kindi. Leyde, 1971.
2. Al-Kindi, vues sur le temps. - ASP. 3. 1993, No 1, 55-76.

Jolivet, J. and Rashed, R.

1. al-Kindi. - DSB. 15, 1978, 261-267.
2. al-Kindi. - EI.2. 5, 1986, 121-123.

Jourdain, Amédée

1. Mémoire sur l'observatoire de Méragha et les instruments employés pour y observer. - Magazin encyclopédique. 6, 1809, 43-88, P., 1810.
2. Notice historique sur Aboul-Féda et ses ouvrages. - Ann. des voyages, 14. 1811, 180-230; "Mathematical Geography" [4], 1992, 115-165.

Jumabayev, Yu.

1. Ob eticheskikh vozzreniyakh Beruni. - ONU. 1973, Nos 7-8, 84-88.

al-Junabadi (No 1069)

1. Sharh-i Bist bab ma`rifat-i taqwin. Tehran, 1271 h. [1855], 1282 h. [1865], 1276 h. [1859].

al-Jurjani (No 788)

1. Kitab al-Ta`rifat. Definitiones viri meritissimi Sejjid Scherif Ali ben Mohammed Dschordschani accedunt definitiones theosophi Mohji-ed-dini Mohammed ben Ali vulgo Ibn Arabi dicti. Ed. et annot. G.Fluegel. Lipsiae, 1845.
2. Majmu`a-yi mantiq. Lukhnow, 1289 h. [1872].
3. Al-Ta`rifat. Istanbul, 1318 h. [1900].
4. Mir Sa`id Sharif Jurjani. Risala fi tahqiq al-wujud. - Majalla Danishkada-yi ada-biyyat wa `ulum-i insani-yi Danishgah-i Tehran, 1349 s.h. [1971], No 1-2.

Juttner, G.

1. Gabir-Corpus (Geber). - LM. 4, 1988, 1071.

al-Juzjani (No 318)

1. Sargudhasht-i Ibn Sina. Tehran, 1331 s.h. [1952].
2. Abubayd Abdulwohidi Juzjoni. Risolai Sarguzashti Ibni Sino. - Sadoi Sharq, 1970, No 9, 82-85.

Kabir, H.

1. al-Fihris al-tamhidi al-mashruh li'l-makhtutat al-`arabiyya al-makhzuna fi Mathaf Salar-i Jang. Haydarabad, 1962.

Kagan, Veniamin Fyodorovich (1869-1953)

1. Osnovaniya geometrii. Ucheniye ob obosnovanii geometrii v khode yego istoricheskogo razvitiya. 1. Geometriya Lobachevskogo i yego predistoriya. M.-Lg., 1949. 2. Interpretatsii geometrii Lobachevskogo i razvitiye yego idey. M., 1956.

Kahhala, `Umar Rida

1. Makhtutat Dar al-kutub al-Zahiriyya bi-Dimashq. - MMMA. I, 1955, 5-7.

Kahle, Paul Christian (1875-1964)

1. Piri Reis. Bahriye, das türkisches Segelhandbuch für das Mittellandische Meer von Jahre 1521. 1-2. B.-Lpz., 1926.
2. Piri Reis und seine Bahrije. - Beträge zur historischen Geographie, Kulturgeographie und Kartographie, vornehmlich des Orients. Herausg. von Hans Mzik. Lpz.-Wien, 1929, 60-76; "Mathematical Geography" [12]. F.M., 1992, 120-136.
3. Die verschollene Columbus-Karte von 1498 in einer türkischen Weltkarte von 1513. B.-Lpz., 1933; "Mathematical Geography" [12], F.M., 1992, 165-225.

Kahle, P. E.

1. Al-Biruni. - J. of the Asiatic Society of Pakistan. Dhaka, I, 1956, No 1, 18-24.

Kakorawi (No 1410)

1. Risala dar jabr u Muqabala. Kalkata, 1330 h. [1912] (in al-`Amili [2]).
2. Risola dar jabru muqobala. Tahiyayi matn, faksimile, tavzehot az I.Khojiyev, Dushanbe, 1983.
3. Traktat po algebre. Per., faksimile i komm. I.Khojiyeva. Dushanbe, 1983.

Kal', Yevgeniy Fyodorovich (1863-1891)

1. Persidskiye, arabskiye i tyurkskiye rukopisi Turkestanskoy publichnoy biblioteki. Tash., 1889.

Kalinina, Tat'yana Mikhaylovna

1. "Kniga kartiny Zemli" al-Khorezmi kak istochnik po istorii narodov SSSR. - al-Khorezmi [4], 1985, 211-227.
2. Svedeniya al-Khorezmi o Vostochnoy Yevrope i Sredney Azii. - Drevneyshiye gosudarstva na territotii SSSR. Materialy i issledovaniya. M., 1984, 179-199.
3. Drevneyshiye istochniki po istorii SSSR. Svedeniya rannikh uchonykh Arabskogo Khalifata. M., 1988.

Kamal, Muhammed

1. Fihris al-makhtutat al-muwada`a fi khizana Ma`had al-turath al-`ilmiyya al-`ara-biyya. Institute for History of Arabic Science. Catalogue of Manuscripts. Halab-Aleppo, 1400 h. [1980].

Kamalu'd-Din, Ahmad and `Abdu' l-Muqtadir

1. Catalogue on the Arabic and Persian Manuscripts in the Library of Calcutta Madrasah. Calcutta, 1905.

Kamil Husayn, Sayyid

1. Fihrist-i nusakh-i qalami-yi `arabi, farisi wa urdu Subhanallah Uriyantal Laybriri Muslim Yuniwarsiti `AligGarh. `Aligarh, 1348 h. [1930].

Kannun, `Abdallah

1. al-Makhtutat al--`arabiyya fi Tatwan. - MMMA. 1, 1955, 170-198.

Kapp, A. G.

1. Arabische Übersetzer und Kommentatoren Euklids sowie deren math.-naturwiss. Werke auf Grund des Ta'rikh al-hukama' des Ibn al-Qifti. 1-3. - Isis. 22, 1934, No 1, 150-172; 23, 1935, No 1, 54-99; 24, 1936, No 1, 37-79.

Karahan, Abdülkadir [Qarakhan, `Abd al-Qadir]

1. Nev'i. - IA. 9, 1966, 224-226.
2. Süyuti. - IA. 11, 1970, 258-263.
3. Abu Rayhan al-Biruni - Muallifatuhu al-makhṭuṭat bi'l-maktabat Istanbul. - "al-Biruni" [9], 1979, 821-826.

al-Karaji (No 309)

1. Al Kafī fil Hisâb (Genügendes über Arithmetik) des Abu Bekr Muhammed Ben Alhusein Alkarchi von Dr. Adolf Hochheim. 1-3, Halle a/S, 1878-1880.
2. al-Karaji (al-Karkhi). al-Badi` fi'l-hisab. Tahqiq `Adil Anbuba. Beirut, 1384 h. [1964].
3. Kitab inbat al-miyah al-khafiya. Haydarabad, 1360 h. - Hyderabad, 1941.
4. Istihraj-i abha-yi pinhani. Tarjama-yi Husayn Khidiw Jam. Tehran, 1345 s.h. [1966].
5. Karaği (Mohammed al). La civilisation des eaux cachées. Traité de l'exploitation des eaux souterraines (Composée en 1017). Texte établi, traduit et commenté par Aly Mazahéri. Nice, 1973.

Karamustafa, Ahmet T.

1. Maps and Mapmaking: Islamic Terrestrial. - ENWC. 1997, 573-577.

Karatay, Fehmi Edhem

1. İstanbul Üniversitesi Arapça Yazmalar Kataloğu. 1-2. İstanbul, 1951-1953.
2. Topkapı Sarayı Müzesi Kütüphanesi Farsça Yazmalar Kataloğu. İstanbul, 1961.
3. Topkapı Sarayı Müzesi Kütüphanesi Türkçe Yazmalar Kataloğu, İstanbul, 1961.
4. Topkapı Sarayı Müzesi Kütüphanesi Arapça Yazmalar Kataloğu, 1-4. Istanbul, 1963-1969.

Karayev, Nazim H.

1. "Dialektika" al'-Farabi. - "al-Farabi" [4], 1975, 72-74.

Karimov, S.

1. Farabi o ponyatii materii. - ONU. 1973, No 6, 61-62.

Karimov, Ubaydulla Israil ughli (b. 1918)

1. K voprosu o vzglyadakh Ibn Siny nakhimiyu. - "Ibn Sina" [5], 1953, 38-45.
2. Neizvestnoye sochineniye ar-Razi "Kniga tayny tayn".Tash., 1957.
3. Klassifikatsiya nauk po Ibn Sine. - Tezisy dokladov i soobshcheniy I Vsesoyuznoy konf. vostokovedov. Tash., 1957, 986-990.
4. Kitab as-Saydana ("Farmakognoziya") Beruni. - ONU. 1970, No 5, 55-59; ADD(fl). Tash.,1971.
5. Odate smerti Beruni.-ONU. 1970, No 8, 67-68.
6. "Farmakognoziya" Abu Rayhana Beruni i yeyo mesto v istorii lekarstvovedeniya na-srednevekovom Vostoke.- ACIHS XIII (M., 1971).3-4, 1974, 209-212.
7. "Kniga tayn" i "Kniga tayny tayn" al-Razi. - Tash., 1988.
8. `Ubaydallah Karimuf. "Kitab al-asrar" wa "Kitab sirr al-asrar" li'l-Razi. AJ. 3, 1989,-14-36.

Karimullin, A. G.

1. Vostokovednyye fondy Kazanskogo universiteta. - Problemy vostokovedeniya. 1959, No 1, 153-157; "Vostokovednyye fondy" [1],1963,-228-236.

Karpinski, Louis Charles (1878-1956)

1. Hindu Numerals in the Fihrist. - BM (3). 11, 1911, 121-124.
2. Robert of Chester's Translation of Algebra of Al-Khowarizmi. - BM (3). 11, 1911, 125-131; Robert of Chester's Latin Translation of the Al-Khowarizmi with an Introduction, Critical Notes and an English Version. N.Y., 1915; L.C.Karpinski, J.G.Winter. Contributions to the History of Science. Ann Arbor, 1930, 66-125.
3. The Algebra of Abu Kamil Shoja` ben Aslam. - BM (3). 12, 1912, 40-55; The Amer. Math. Monthly. 21, 1914, 37-48.
4. Hindu Numerals among the Arabs. - BM (3). 13, 1913, 97-98.

Karpova, Lyubov' Aleksandrovna (b. 1937) and Krasnova, S. A.

1. Matematicheskiy traktat al-Biruni "Ob opredelenii khord v kruge pri pomoshchi svooystv lomanoy linii, nakhodyashcheysya v nyom". - Voprosy istorii fiz.-mat. nauk. M., 1963, 96-101.

Karpova, Lyudmila Mikhaylovna (b. 1934)

1. Traktat Sabita ibn Korry o secheniyakh tsilindra i yego poverhnosti. - ACIHS XIII (M., 1971). 3-4, 1974, 103-105.

Karpova, L. M. and Rosenfeld, B. A.

1. Traktat Sabita ibn Korry o sostavnykh otnosheniyakh. - IMEN. 5, 1966, 126-130.
2. The treatise of Thabit ibn Qurra on Sections of a Cylinder, and of Its Surface. - AIHS. 24, 1974, 66-72.

Karpova, L. M. and Sergeyeva, N. D.

1. Grafik funkttsii u al-Marakishi. - IMI. 23, 1978, 231-234.
2. Grafik funktsiona'noy zavisimosti v arabskom traktate XIII veka ob astronomi-cheskikh instrumentakh. - Tezisy dokladov III Vsesoyuz. nauchnoy konf. po istorii fiz.-mat. nauk. Tbilisi, 1978, 29.

Karpova, L. M. and Tagi-zade, A. K.

1. Traktat al-Sagani "Kniga o sposobe proyektirovaniya stery na ploskost' astrolabii". TNKA XV(m), 1972, 77-81.

al-Kashghari (No 395)

1. Kitab Diwan-i lughat al-turk. Kilisti Mu`allim Rif`at Bilge. Istanbul, 1915-1917.
2. Mahmud Koshghoriy turkiy suzlar devoni (Devonu lughot il-turk). Nash. M.S.Mutallibov. 1-3. Toshkent, 1960-1963.

al-Kashi (No 802)

1. Majmu`. Tehran, 1306 h. [1888].
2. Miftah al-hisab. Tehran, 1307 h. [1889].

3. Risala dar sharh-i alat-i rasad. Prilozheniye: Barthold [2], 1918.
4. Ğamsid b. Mas'ud al-Kasi. Der Lehrbrief über den Kreisumfang (ar-Risala al-Muhitiya). Übersetzt und erläutert von P.Luckey, herausg. von A.Siggel. B., 1953.
5. Mathematicheskiye traktaty Jemshida Giyaseddina Kashi. Per. B.A.Rozenfel'da, Prim. A.P.Yushkevicha i B.A.Rozenfel'da. - IMI. 7, 1954, 11-449.
6. Jemshid Giyaseddin al-Kashi. Klyuch arifmetiki, Traktat ob okruzhnosti. Per. B.A. Rozenfel'da, red. V.G.Segalya i A.P.Yushkevicha, komm. A.P.Yushkevicha i B.A.Rozenfel'da. M., 1956.
7. Jamshid Giyath al-Din al-Kashi. The Extraction of the "n"-th Root in the Sexagesimal Notation. A Study of Chapter 5, Treatise 3 of Miftah al- hisab. Transl. Abdul-Kader Dakheli, ed. Wasti A.Hijab and E.S.Kennedy, Beyrut, 1960.
8. Miftah al-hisab. Tahqiq wa sharh al-ustadh Ahmad Sa'id al-Damardash, duktur Muhammad Hamdi al-Hafni al-Shaykh, muraja'a al-ustadh 'Abd al-Hamid Lutfi. al-Qahira, 1968.
9. Pis'mo ob Ulughbeke i o Samarkandskoy nauchnoy shkole. Per. G.Sobirova i N.Babayeva. - Sobirov [9], 1975, 181-208.
10. Miftah al-hisab. Tahqiq Nadir al-Nabulusi. Dimashq, 1398 h. [1977].

al-Kashi, Yahya ibn Ahmad

1. Nukat fi ahwal al-Shaykh al-Rais Ibn Sina. Nashara Ahmad Fuad al-Akhwani. Aperçu sur la biographie d'Avicenne. - "Ibn Sina" [4], 3, 1952.

al-Kashifi (No 898)

1. Akhlaq-i Muhsini. Tehran, 1268 h. [1852].
2. Risala-yi Hatimiyya. Tehran, 1320 h. [1902].
3. Fragmenty iz "Akhloki Muhsini'. Per. H.Alikulova. - "Materialy" [2], 1976, 463-467.

Kästner, Abraham Gotthelf (1719-1800)

1. Geschichte der Mathematik. 1. Göttingen, 1796.

"Katalog"

1. Katalog der Bibliothek der Deutschen Morgenländischen Gesellschaft. 2, Halle a/S, 1881.
2. Katalog arabskikh rukopisey Instituta istorii, yazyka i literatury Dagestanskogo filiala AN SSSR. I. Pod red. M.S.Saidova. M., 1977.

Katanov, Nilolay Fyodorovich (1862-1922)

1. Iosif Fyodorovich Gotval'd. 2. Katalog knig i rukopisey, pozhertvovannykh im Imp. Kazanskomy universitetu. Kazan', 1900.

Kataye, Salman

1. Kitab "al-Qanun fi'l-tibb" li-Ibn Sina. Le Canon d'Avicenne. - AH. 1, 1975, 109-125, arab. 10-11.

al-Katibi al-Qazwini (No 616)

1. al-Risala al-shamsiyya fi'l-qawa'id al-mantiqiyya. Kalkata, 1231 h. [1816]. 1242 h. [1828]; Qustantiniyya, 1263 h. [1847]; Lucknow, 1308 h. [1891].

Katz, Victor J.

1. Combinatorics and Induction in Medieval Hebrew and Islamic Mathematics. - Vita mathematica. 1992, 99-106.

Kaya, Mahmut

1. Some Findings on Translations Made in the 8th Century from Greek & Es'ad Efendi's Translation of the Physica – Transfer of Modern Science & Technology to the Muslim World, İstanbul 1992, p. 385-393.

Kaye, G. R.

1. The Astronomical Observatories of Jai Singh. Calcutta, 1918.
2. L'origine de notre notation numérique. - Scientia. 24, 1918, 33-35.
3. A Guide to the Old Observatories of Delhi, Jaipur, Ujjain, Benares. Calcutta, 1920.

Kaymarazov, Ghani Shihvaliyevich

1. Ocherki istorii kul'tury narodov Dagestana. M., 1971.

Kayumov, D. Kh., Sharipov, Yu.

1. O matematicheskom traktate Risala dar `ilmi hisab. - Uzbek. Matem. Zh. 2, 1994, 40-43.

Kaziberdov, Anatoliy Leont'yevich (1927-1991)

1. Sochineniya Farabi v rukopisyakh Instituta Vostokovedeniya AN Uzb. SSR. - ONU. 1973, No 6, 78-82; "al-Farabi" [4], 1975, 103-105; Tash., 1975.
2. Muallafat al-Farabi fi makhtutat Ma`had al-istishraq Akadimiya al-`ulum bi-Jumhuriyya Uzbikistan al-Sufyatiyya al-Ishtirakiyya. - AJ. 3, 1989, 140-151.

Kaziberdov, A. L. and Mutallibov, S.A.

1. Abu Nasr al-Farabi. Issledovaniya i perevod. Tash., 1986.

Kazim, M. A.

1. Al-Biruni and Trigonometry. - "al-Biruni" [4], 1951, 160-171.

Kedrov, Bonifatiy Mikhaylovich (1903-1985)

1. Klassifikatsiya nauk. I. M., 1961.
2. Velikiy sredneaziatskiy uchonyy-entsiklopedist Biruni. - VIYT. 1974, Nos 47-48, 60-68.
3. El-Farabidin ghylymdardy türge bölüi. - Bilim jäne engbek, 1975, No 12, 22-25.

Kedrov, B. M., Esenov, Sh. E. and Qasymjanov, A. Kh.

1. Filosofskiye vozzreniya al'-Farabi. - al-Farabi [16], 1970, 10-50.
2. El-Farabidin filosofiyalyq közqarastary. - al-Farabi [18], 1973, 10-40.

Kedrov, B. M. and Rosenfeld, B. A.

1. Abu Rayhan Biruni. M., 1973.

Kennedy, Edward Stewart (b. 1912)

1. Al-Kashi's "Plate of Conjunctions". - Isis. 38, 1947, 56-59; "Kennedy" [1], 1983, 448-451.
2. A Fifteenth-century Planetary Computer: al-Kash's "Tabaq al-manateq". I. Motion of the Sun and Moon in Longitude. - Isis. 41, 1950, 180-183; "Kennedy" [1], 1983, 452-455. II. Latitudes, Distances and Equations of the Planets. - Isis. 41, 1952, 42-50; "Kennedy" [1], 1983, 472-480.
3. A Fifteeth-century Lunar Eclipse Computer. - Scripta Mathematica. 17, 1951, 91-97; "Kennedy" [1], 1983, 456-462.
4. An Islamic Computer for Planetary Latitudes. - JAOS. 71, 1951, 13-21; "Kennedy" [1], 1983, 463-471.
5. A Survey of Islamic Astronomical Tables. - Transactions of the Amer. Philos. Society. 46. 956, No 2, 123-177.
6. Parallax Theory in Islamic Astronomy. - Isis. 47, 1956, No 1, 33-53; "Kennedy" [1], 1983, 164-184.
7. Comets in Islamic Astronomy and Astrology. - JNES. 19. 1957, No 1, 44-51; "Kennedy" [1], 1983, 311-318.
8. The Sasanian Astronomical Handbook Zij-i Shah and Astrological Doctrine of "Transit" (mammar). - JAOS. 78, 1958, 246-262; "Kennedy" [1], 1983, 319-335.
9. Biruni's Graphical Determination of the Local Meridian. - Scripta Mathematica. 24. 1959, No 3, 251-255.
10. A Horoscope of Messehala in the Chaucer Equatorium Manuscript. - Speculum. 34. 1959, No 4, 629-630; "Kennedy" [1], 1983, 336-337.
11. The Planetary Equatorium of Jamshid Ghiyath al-Din al-Kashi. Princeton, 1960.
12. A Letter of Jamshid al-Kashi to His Father. Scientific Research and Personality at a Fifteenth Century Court. - Orientalia. 29. 1960, No 2, 191-213; "Kennedy" [1], 1983, 722-744.
13. Al-Kashi's Treatise on Astronomical Observational Instruments. - JNES. 20. 1961, No 2, 98-108; "Kennedy" [1], 1983, 394-404.
14. The Crescent Visibility Theory of Thabit bin Qurra. - Proc. of the Math. and Phys. Society of UAR. 1961, No 24, 71-74; "Kennedy" [1], 1983, 140-143.
15. A Medieval Interpolation Scheme Using Second Order Differences. - A Locust's Leg. Studies in honour of S.H.Tagizadeh. L., 1962, 117-120; "Kennedy" [1], 1983, 522-525.
16. Al-Khwarizmi on the Jewish Calendar. - Scripta Mathematica. 27, 1962, 55-59; "Kennedy" [1], 1983, 661-665.
17. Al-Biruni on Determining the Meridian. - The Mathematical Teacher. 56, 1963, 635-637; "Kennedy" [1], 1983, 618-620.
18. The Chinese-Uighur Calendar as Described in the Islamic Sources. - Isis. 55, 1964, 435-492; "Kennedy" [1], 1983, 652-660.
19. The Crescent Visibility Table in al-Khwarizmi's Zij. Centaurus. 11, 1965, 73-80.

20. Late Medieval Planetary Theory. - Isis. 57, 1966, No 3, 365-378; "Ibn al-Shatir" [1], 1976, 91-106; "Kennedy" [1], 1983, 84-97.
21. A Set of Medieval Tables for Quick Calculation of Solar and Lunar Ephemerides. - Oriens. 18-19, 1967, 327-334; "Kennedy" [1], 1983, 114-121.
22. The Exact Sciences in Iran under the Saljuks and Mongols. - The Cambridge History of Iran. 5. The Saljukid and Mongol Periods. Cambridge, 1968, 659-679.
23. The Lunar Visibility Theory of Ja`qub ibn Tariq. - JNES. 27. 1968, No 2, 126-131; "Kennedy" [1], 1983, 157-163.
24. Al-Biruni (al-Beruni). - DSB. 3, 1970, 147-158; "Kennedy" [1], 1983, 562-572.
25. The Equation of Abu al-Salt. - Physis. 12, 1970, 73-81; "Kennedy" [1], 1983, 481-489.
26. Al-Biruni's Maqalid `ilm al-hay'a. - JNES. 30, 1971, 308-314; "Kennedy" [1], 1983, 596-602.
27. Planetary Theory in the Medieval Near East and Its Transmission to Europe. - Accad. Naz. dei Lincei, Fondazione Alessandro Volta. Atti dei convegni. 13. Roma, 1971, 595-604; "Kennedy" [1], 1983, 98-107.
28. A Commentary upon Biruni's Kitab Tahdid al-amakin. Beirut, 1973; "Mathematical Geography" [17]. F. M., 1992.
29. Alpetragius's Astronomy. - JHA. 4, 1973, 134-136.
30. Al-Biruni's Book about Shadows. - ACIHS XIV (Tokyo, 1974). 2, 1975, 288-291.
31. Al-Biruni's Masudic Canon. - Al-Abhath. 24. 1974, No 1-4, 59-81; "Kennedy" [1], 573-595.
32. The Exact Sciences in Abbasid Iran. - The Cambridge History of Iran. 4, 1975, From the Arab Invasion to the Saljuks, Cambridge, 1975, 378-395.
33. Al-Biruni on the Muslim Times of Prayers. - "al-Biruni and al-Rumi" [1], 1975, 83-94; "Kennedy" [1], 1983, 299-310.
34. Commentary. - al-Biruni [47], II, 1976.
35. The Astronomical Tables of Ibn al-A`lam. - JHAS. 1. 1977, No 1, 13-23.
36. The Solar Equation in the Zij of Yahya b. Abi Mansur. - "Prismata", 1977, 183-186; "Kennedy" [1], 1983, 136-139.
37. The Motivation of al-Biruni's Second order Interpolation Scheme. - ISHAS 1. I, 1977, 381-388; II, 1978, 69-71; "Kennedy" [1], 1983, 630-635.
38. Horoscope Determination in Kashi's Zij-i Khaqani. - ISHAS 2. 1979, 61.
39. Planetary Theory: Late Islamic and Renaissance. - Awraq, 5-6, 1982/83, 19-24.
39a. al-Biruni. - LM. 2, 1983, 226-227.
40. Applied Mathematics in the Tenth Century: Abu'l-Wafa' Calculates the Distance Baghdad - Mecca. - HM. 11, 1984, 193-206.
41. Two Persian Astronomical Treatises by Nasir al-Tusi. - Centaurus. 27, 1984, 109-120.
42. Spherical Astronomy in Kashi's Khaqani Zij. - ZGAIW. 2, 1985, 1-46.
43. The Exact Sciences in Timurid Iran. - The Cambridge History in Iran. 6. The Timurid and Safavid Periods, Cambridge, 1986, 568-580.
44. Eclipse Predictions in Arabic Astronomical Tables Prepared for the Mongol Viceroy of Tibet. - ZGAIW. 4, 1987/88, 60-80.
45. Two Medieval Approaches to the Equation of Time. - Centaurus. 31, 1988, 1-8.
46. Al-Sufi on the Celestial Globe. - ZGAIW. 5, 1989, 48-93.
47. Ibn al-Haytham's Determination of the Meridian from One Solar Altitude. - ZGAIW. 5, 1989, 141-144.
48. Two Topics from an Astrological Manuscript: Sindhind Days and Planetary Latitudes. - ZGAIW. 6. 1990, 167-178.
49. Astronomical Events from a Persian Astrological Manuscript. - Centaurus. 24, 1990, 162-177.
50. An Astronomical History Based on the Career of Genghis Khan. - "Quest for Understanding". 1991, 223-231.
51. Ibn Mu`ādh on the Astrological Houses. - ZGAIW. 9. 1994, 153-160.
52. Treatise V of Kashi's Khaqani Zij: Determination of the Ascendent. ZGAIW. 10, 1995/96, 123-145.
53. Mathematical Geography. - EHAS I, 1996, 185-201.
54. The Astrological Houses as Defined by Medieval Islamic Astronomers. - "From Baghdad to Barcelona" [1] II. 1996, 535-578.

"Kennedy"

1. Kennedy, E.S., Colleges and Former Students. Studies in the Islamic Exact Sciences. Beirut, 1983.

Kennedy, E. S. and Agha, Muhammed

1. Planetary Visibility Tables in Islamic Astronomy. - Centaurus. 7. 1960, 134-140; "Kennedy" [1], 1983, 144-150.

Kennedy, E. S. and Debarnot, M.-Th.

1. Al-Kashi's Impractical Method of Determining the Solar Altitude. - JHAS. 3, 1979, No 2, 219-227.
2. Two Mappings Proposed by al-Biruni. - ZGAIW. 1, 1984, 145-147.

Kennedy, E. S. and Destombes, M.

1. Introduction to Kitab al `Amal bil asturlab. Hyderabad, undated; "Kennedy" [1], 1983, 405-447.

Kennedy, E. S., Engle, Susan, and Wamstad, Jeanne

1. The Hindu Calendar as Described in al-Biruni's Masudic Canon. - JNES. 24. 1965, No 3, 274-284; "Kennedy" [1], 1983, 666-676.

Kennedy, E. S. and Faris, Nazim

1. The Solar Eclipse Technique of Yahua b. Abi Mansur. - JHA. 1, 1970, 20-38; "Kennedy" [1], 1983, 185-203.

Kennedy, E. S. and Hamadanizadeh, J.

1. Applied Mathematics in Eleventh-century Iran: Abu Ja`far's Determination of the Solar Parameters. - The Math. Teacher. 58. 1965, No 5, 441-446; "Kennedy" [1], 1983, 535-540.

Kennedy, E. S. and Hogendijk, J. P.

1. The Tables from an Arabic Astronomical Handbook for the Mongol Viceroy of Tibet. - A Scientific Humanist Studies in Memory of Abraham Sachs. Philadelphia, 1988, 233-242.

Kennedy, E. S. and Id, Yusif

1. A Letter of al-Biruni. Habash al-Hasib's Analemma for the Qibla. - HM. 1, 1974, 3-11; "Kennedy" [1], 1983, 621-629.

Kennedy, E. S. and `Imad, Ghanim

1. Ibn al-Shatir. Hayatihi, muallafatihi, mubtakarathi. Makanatihi `ilmiyya. - "Ibn al-Shatir" [1], 1976, 11-32.

Kennedy, E. S. and Janjanian, Mardiros

1. The Crescent Visibility Tables in Al-Khwarizmi's Zij. - Centaurus. 11, 1965, 73-78; "Kennedy" [1], 1983, 151-156.

Kennedy, E. S. and Kennedy, Mary Helen

1. Geographical Coordinates of Localities from Islamic Sources. F. M., 1987.
2. Al-Kashi's Geographical Table. - Transactions of the Amer. Philos. Society. 77, 1987, No 7, 1-45.

Kennedy, E. S. and King, D. A.

1. Ibn al-Majdi's Tables for Calculating Ephemerides. - JHAS. 4, 1980, 48-68; King [43], 1986, 76-96; [72], 1993, No 6.
2. Indian Astronomy in Fourteenth Century Fez: the Versified Zij of Qusuntini. - JHAS. 6, 1982, 3-45; King [43], 1986, 105-147; [72], 1993, No 8.

Kennedy, E. S. and Krikorian-Preisler, Haikanoush

1. The Astrological Doctrine of Projecting the Rays. - Al-Abhath. 25. 1975, No 1-4, 3-15; "Kennedy" [1], 1983, 372-384.

Kennedy, E. S. and Muruwwa, Ahmad

1. Biruni on the Solar Equation. - JNES. 17, 1958, 112-121; "Kennedy" [1], 1983, 603-612.

Kennedy, E. S. and Pingree, D.

1. The Astrological History of Masha'allah. Cambridge, 1971.

Kennedy, E. S. and Roberts, V.

1. The Planetary Theory of Ibn al-Shatir. - Isis. 59. 1959, No 3, 227-235; "Ibn al-Shatir" [1], 1976, 60-68; "Kennedy" [1], 1983, 55-63.

Kennedy, E.S. and Sharkas, Haydar

1. Two Medieval Methods for Determining the Obliquity of the Elliptic. - The Math. Teacher. 55. 1962, No 4, 286-290; "Kennedy" [1], 1983, 517-521.

Kennedy, E.S. and Transue, W. R.
1. A Medieval Iterative Algorism. - Amer. Math. Monthly. 63, 1956, No 2, 80-83; "Kennedy" [1] , 1983, 513-516.

Kennedy, E. S. and Ukashah, Walid
1. Al-Khwarizmi's Planetary Latitude Tables. - Centaurus. 14. 1969, No 1, 86-96; "Kennedy" [1], 1983, 125-135.
2. The Chandelier Clock of Ibn Yunis. 60, 1969, 543-545; "Kennedy" [1], 1983, 499-501.

Kennedy, E. S. and Van der Waerden, B. L.
1. The World Year of the Persians. - JAOS. 83, 1963, 313-327; "Kennedy" [1], 1983, 338-350.

Kerimov, Lyatif and Aghayeva, Surayya
1. Avtobiografiya v stikhakh Abdulgadira Maraghi. - IAN Azerb. SSR, ser. lit., yaz. i ist. !975, No 4, 119-127.

Kerimov, Qasim Mamed oghlu
1. Al'-Gazali i sufizm. Baku, 1969.

el-Khachab [al-Khashshab], Yahya
1. Introduction. - Nasir-i Khusraw [11], 1940, 1-36.

Khalidi, Salah al-Din
1. Ibn al-Shatir, the Mathematician and Astronomer. - ISHAS 1. I, 1977, 135-139; II, 1978, 72.

Khalidov, Anas Bakiyevich
1. Dopolneniya k tekstu "Khronologii" al-Biruni po Leningradskoy i Stambul'skoy rukopisyam. - Palestinskiy sbornik. 4 (67), 1959.
2. Arabskiye rukopisi biblioteki Leningradskogo otdeleniya Instituta Narodov Azii AN SSSR - "Vostokovednyye fondy", 1963, 33-37.
3. Sobraniye arabskikh rukopisey v Narodnoy Demokraticheskoy Respublike Yemen. - Pis'mennyye pamyatniki Vostoka. M., 1979, 179-202.

Khalidov A. B. and Ehrmann [Erman] Vladimir Hansovich
1. Predisloviye k perevodu "Indii" al-Biruni. - al-Biruni [21], 1963, 7-53.

Khalilov Zahid Ismail oghlu (1911-1973)
1. Näsiräddinin "Tähriri Öqlidis" äsäri haqqynda. O proizvedenii Nasireddina "Tahriri Églidis". - "al-Tusi" [1], 1951, 8-11, 40-42.
2. Näsiräddin Tusinin riyazi äsärläri haqqynda. O matamaticheskikh trudakh Nasir-eddina Tusi. Raji` ba athar-i riyadi-yi Nasir al-Din Tusi. Baky, 1956.

Khalilov Z. I. and Mamedbeyli H. J.
1. Predisloviye. - al-Tusi [12], 1952, 3-21

Khan, M. Abdur Rahman
1. Muslim Contribution to Meteoric Astronomy. - Islamic Culture. 20, 1946, No 4, 1946.
2. Names of Thirteen Muslim Astronomers Given to Some Natural Features of the Moon. - Islamic Culture. 27, 1953, No 2, 78-85.
3. Physics and Mineralogy. - A History of Muslim Philosophy. 2. Wiesbaden, 1966, 1292-1296.

Khan, M. S.
1. An Account of Arabic Sciences in an Eleventh-century Hispano-Arabic World. - ISHAS 1. I, 1977, 141-143; II, 1978.
2. Qadi Sa`id's Account of Medieval Arab Astronomy. Aqwal al-Qadi Sa`id. - ISHAS 2, 1979, 62-63, Suppl. 37-38.
3. Tabaqat al-Umam of Qadi Sa`id al-Andalusi (1029-1070 A.D.) - IJHS. 300, 1995, No 2-4, 133-149.

Khana, Ghanem Georges
1. Al-Biruni. - GWG. 3. Zürich, 1973, 210-220.
2. Ibn-Sina (Avicenna). - GWG. 3. Zürich, 1973, 222-230.
3. Ibn Rusd (Averroes). - GWG. 3. Zürich, 1973, 440-448.

4. Al-Gazali. - GWG. 3. Zürich, 1973, 322-333.

Khanykov, Nikolay Vladimirovich (1822-1878)

1. Analysis and Extracta of Kitâb mîzân al-hikma (Book of the Balance of Wisdom), an Arabic Work on the Water-balance, Written by al-Khâzinî in the Twelfth Century. - JAOS. 6, 1859, 1-128.

al-Khaqani, `Ali

1. Makhtutat al-Maktaba al-`Abbasiyya fi'l-Basra. - Majalla al-Majma` al-`ilmi al-`Iraqi. 8, 1961, 365-428, 9, 1962, 218-313.

Kharenko, Yekaterina Dmitriyevna

1. Sotsial'no-etichaskiye vozzreniya al'-farabi. - "al-Farabi" [1], 1975, 3-12.
2. Nasledіye al'-Farabi. - "al-Farabi" [2], 1975, 107-114.
3. Aristotel' i al'-Farabi. - "al-Farabi" [2], 1975, 164-169.
4. Razvitiye idey ontologii Aristotelya v filosofii al-Farabi. - ADK (fs). Alma-ata, 1976.

Khatak, Sarfaraz Khan

1. Shaikh Muhammed `Ali Hazin, Life, Time and Works. Lahore, 1944.

Khatchadourian, Haig and Rescher, N.

1. Al-Kindi's Epistle on the Concentric Structure of the Universe. - Isis. 56, 1965, 190-195.

Khatipov, Amed-Asan [Ahmad-Hasan] Emirovich (b. 1914) and Usmanov, A. U.

1. Ob astronomicheskom traktate Ali Kushchi "Risala dar falakiyat" i kommentarii k nemu Muslih al-Dina Ansari. - ACIHS XIII (M., 1971). 3-4, 1974, 139-141.

Khayretdinova [Golikova], Nuriya Ghalimovna (b. 1937)

1. Trigonometricheskiy traktat isfahanskogo anonima. - IMI. 17, 1966, 399-464.
2. Sfericheskaya trigonometriya na srednevekovom Vostoke i rol' anonimnogo traktata "Sobraniye pravil nauki astronomii" v yeyo razvitii. ADK(fm). M., 1968.
3. Nazvaniya trigonometricheskikh liniy na srednevekovom Vostoke. - TNKA X-XI (m). 1968, 48-53.
4. Trigonometriya v trudakh al-Farabi i Ibn Siny. - VIYT. 3 (28), 1969, 29-31.
5. On the Oriental Sources of the Regiomontanus' Trigonometrical Treatise. - AIHS. 38, 1970, 61-66.
6. Traktat Ibn Iraka po sfericheskoy trigonometrii. - Sbornik nauchnykh statey Vseso-yuznogo Zaochnogo Inzhenerno-stroitel'nogo Instituta. 3, 1973, 169-170.
7. Istochniki trigonometricheskikh traktatov al-Biruni i isfahanskogo anonima. - ACIHS XIII (M., 1971). 3-4, 1974, 108-111.
8. K istorii "Knigi o figure sekushchikh" Nasir ad-Dina at-Tusi. - VIYT. 1 (54), 1976, 42-43.
9. Geometricheskiy traktat al-Sijizi. - Tezisy dokladov III vsesoyuz. nauchnoy konf. po istorii fiz.-mat. nauk. Tbilisi, 1978, 61.
10. Trigonometriya al-Sijizi. - IMI. 26, 1982, 197-204.
11. Istoriya polyarnogo treugol'nika. - IMI. 28, 1985, 154-159.
12. Istoriya sfericheskoy teoremy tangensov. - IMI. 29, 1989, 48-54.
13. On Spherical Trigonometry in the Medieval Near East and in Europe. - HM. 13, 1986, No 2, 136-146.

Khayrullayev, Muzaffar Muhitdin ughli

1. Biruniy. Tash., 1957.
2. Biruni. - FÉ. I, 1960, 170.
3. Abu Nasr Forobiy. Hayoti va ta"limoti haqida kiskacha ocherk. Toshkent, 1961.
4. Forobiy va uning falsafiy risolalari. Toshkent, 1963.
5. Mirovozzreniye Farabi i yego znacheniye v istorii filosofii. ADD(fs). Tash., 1966; Tash., 1967.
6. Farabi. - FÉ. 5, 1970, 302.
7. Abu Nasr Farabi. - "Iz filosofskogo naslediya" [I], 1972, 106-139..
8. Farabi - krupneyshiy myslitel' srednevekov'ya (k 1100-letiyu so dnya rozhdeniya Abu Nasra Farabi). Tash., 1973.
9. Farabi i yego mesto v istorii obshchestbenno-filosofskoy mysli. - ONU. 1973, No 6, 9-22.
10. Farabi i nekotoryye voprosy razvitiya yestestvenno-nauchnogo znaniya na sredne-vekovom Vostoke. - ACIHS XIII (M., 1971). 3-4, 1974, 120-122.
11. Farabi i yego filosofskiye vzglyady. M., 1975.
12. Farabi. Epokha i ucheniye. Tash., 1975.

13. Forobiy - sharqning mashhur mutafakkir. - al-Farabi [27], 1975, 3-18.
14. Al'-Farabi i razvitiye svobodomysliya. - "al-Farabi" [4], 1975, 7-9.
15. Filosofskiye i sotsiologicheskiye vzglyady Farabi. - "Ocherki" [1], 1977, 62-87.
16. Farabi i Ibn Sina. - "Ibn Sina" [8], 1980, 61-71.
17. Abu Nasr al'-Farabi. M., 1981.
18. O malykh traktatakh i perepiske Ibn Siny. - "Ibn Sina" [12], 1981, 52-57.
19. Vydayushchiysya uchonyy - myslitel' IX veka. - "al-Khwarizmi" [1], 1983, 5-8.
20. Al-Khorezmi i yego epokha. - VIYT. 1983, No 3, 10-15.
21. Vydayushchiysya nauchnyy podvig. - ONU. 1983. No 7, 4-10.
22. O mirovozzrenii i nauchnykh ideyakh al-Khorezmi. - "al-Khwarizmi" [4], 1985, 32-39.

Khayrullayev, M. M. and Bahadirov, R. M.

1. Abu Abdallah al-Khorezmi (X vek). M., 1988.

Khayrullayev, M. M. and Boltayev, M. N.

1. Obshchestvenno-filosofskiye vozzreniya Ibn Siny. - "Ocherki" [1], 1977, 113-140.

Khayrullayev, M. M. and Sharipov, A. D.

1. Filosofskiye vzglyady Abu Abdallaha Khorezmi. - "Ocherki" [1], 1977, 87-93.

Khayrullayev M. M. and Zahidov, A.

1. Maloizuchennyye stranitsy naslediya Ibn Siny (o perepiske i poslaniyakh Ibn Siny). - Voprosy filosofii. 1980, No 7, 76-83.

Khayyam (No 420)

1. L'Algèbre d'Omar Alkhayyâmî, publiée, traduite et accompagnée par extraits de traités inédites par F.Woepcke. P., 1851; Woepcke [27], 1986, I, 49-256.
2. Rubaiyat of Omar Khayyam. Transl. by E.Fitzgerald. L., 1859, 1868, 1872, 1879, 1900.
3. Les quatrains de Khèyam. Éd. et trad. par J.B.Nicolas. P., 1867.
4. The Quatrains of Omar Kheyyam. Ed. and transl. by E.H.Whinfield. L., 1883.
4a. The Riba'iyat of 'Omar Khayyam. Ed. and transl. by E.Heron-Allen. L., 1898.
5. Ruba'iyat-i hakim-i 'Umar-i Khayyam ba muqaddima-yi duktur Fridrikh Ruzin. Barlin, 1925.
6. Robayyat. Per. I.I.Tkhorzhevskogo. - Sovremennyye zapiski. 29, 1926, 189-201.
7. The Algebra of Omar Khayyam. Transl. by D.S.Kasir. N.Y., 1931.
8. Nawruz-nama. Ba ihtimam-i Mujtaba Minuwi. Tehran, 1312 s.h. Nowruz-namah, a Treatise on the Origin, History and Ceremonies of the Persian New-year Festival. Ed. with Notes by M.Minovi. Tehran, 1933.
9. Robayyat. Per. O.Rumera, V.Tardova, L.N. i K.Chaykina, stat'ya A.Bolotnikova. M.-Lg., 1935.
9a. Robayyat. Per. L.N[ekory]. - Vostok. 2. M.-Lg., 1935, 213-242.
10. Risala fi sharh ma ashkal min musadarat kitab Uqlidis li-hakim 'Umar ibn Ibrahim al-Khayyami. Nashir duktur T.Irani. Discussion on Difficulties of Euclid. Ed. by T.Erani. Tehran - Tehran. 1314 s.h. - 1936.
11. Umar Khayyom. Rubojjot. Red. Z. Mullokanda. Stalinabad - Lg., 1936.
12. Chetverostishiya. Per. i stat'ya O.Rumera. M., 1938.
13. Ruba'iyat-i hakim Khayyam Nishapuri ba ihtimam-i M.L.Furughi. 1322 s.h. [1943].
14. Chetverostishiya. Izbrannoye. Per. L.N., O.Rumera, I.Sel'vinskogo i I.Tkhorzhevskogo, stat'ya S.B.Morochnika. Stalinabad, 1948, 1949, 1954.
15. The Ruba'iyat of 'Omar Khayyam. Ed. by A.J.Arberry. L., 1949.
16. The Algebra of 'Umar Khayyam. Transl. by H.J.J.Winter and W.'Arafat. - JRASB. 16, 1950, 23-44.
17. 'Omar Khayyam. A New Version Based upon Recent Discoveries. Ed. by A.J.Ar-berry. L., 1952.
18. Matematicheskiye traktaty. Per. B.A.Rozenfel'da, prim. B.A.Rozenfel'da i A.P.Yu-shkevicha. - IMI. 6, 1953, 11-72.
19. Rubai. Per. O.Rumera i I.Tkhorzhevskogo, stat'ya R.Aliyeva i M.N.Osmanova. M., 1953, 1955.
20. Umari Khayyom. Ruboyyot. Red. A.Mirzoyeva. Stalinabad, 1956; Dushanbe, 1963.
21. 'Omar al-Khayyami. Discussion of difficulties in Euclid. Transl. by A.R.Amir-Moéz. - Scripta Mathematica. 24, 1959, No 4, 275-303.
22. Kulliyat-i athar-i parsi. Ba ihtimam-i M.'Abbas. Tehran, 1338 s.h. [1959].
23. Ruba'iyat. Per. i predisloviye R.M.Aliyeva i M.-N.O.Osmanova, pod red. Ye.E.Bertel'sa. M., 1959.
24. Risala fi sharh ma ashkal min musadarat kitab Uqlidis. Tasnif Abi'l-Fath 'Umar ibn Ibrahim al-Khayyami. Tahqiq ad-duktur 'Abd al-Hamid Sabra. Explanation of the diffi-culties in Euclid's postulates, ed. by A.I.Sabra. al-Iskandariyya, 1381 h. - Alexandria. 1961.

25. Traktaty. Per. B.A.Rozenfel'da pod red. V.S.Segalya i A.P.Yushkevicha, komm. B.A.Rozenfel'da i A.P.Yushkevicha. M., 1962.
26. Pervyy algebraicheskiy traktat. Per. i prim. S.A.Krasnovoy i B.A.Rozenfel'da. - IMI. 15, 1963, 445-472.
27. Rubayyat. Per. i stat'ya B.Derzhavina. Dushanbe, 1965.
28. The Original Rubaiyyat of Omar Khayyam. A new Translation with Critical Comm. by R.Graves and O.Ali-Shah. N.Y., 1968.
29. Rubayat. Per. G.Plisetskogo, podstrochnyy per., sostavleniye i posleslovive M.-N. O.. Osmanova. M., 1972.
30. O pryamom kustase. Per. i prim. I.S.Levinovoy. - IMI. 19, 1974, 274-278.
31. Rech' o rodakh, kotoryye obrazuyutsya kvartoy. Per. i prim. B.A.Rozenfel'da i N.G. Khayretdinovoy. - IMI. 19, 1974, 279-284.
32. Traktat o vseobshchnosti sushchestvovaniya. Per. B.A.Rozenfel'da. - "Materialy" [2], 1976, 368-374.
33. Rubai. Per. I.Tkhorzhevskogo. - G.Guliya. Skazaniye ob Omare Khayyame. M., 1976, 257-299.
34. Rubai. Per. O.Rumera, I.Tkhorzhevskogo, V.Derzhavina, G.Plisetskogo, N.Strizhkova. Tash., 1978.

al-Khayyat (No 37)

1. Albohali Arabis astrologi antiquissimi ac clarissimi de judiciis nativitatum unus, ed. J. Schoner. Norimbergae, 1546, 1549.

Khazin (No 194)

1. Muhammad ibn al-Husayn. Poslaniye o dokazatel'stve togo, chto nevozmozhno, chtoby summa dvukh kvadratnykh chisel, summa kotorykh yavlyaetsya kvadratom, byla by nechotnym chislom. Per. B.A.Rosenfel'da. - Nauchnoye nasledstvo. 6, M., 1983, 161-174.

al-Khazini (No 476)

1. Kitab mizan al-hikma. Hyderabad, 1359 h. [1940].
2. Kniga vesov mudrosti. Per. M.M.Rozhnskoy i I.S.Levinovoy. - Nauchnoye nasledstvo. 6, M., 1983, 15-140, 276-308.

Kheirandish, J.

1. Optics in the Islamic World. - ENWC, 1997, 795-798.

Khidiv Jam, Husayn

1. Jawami` al-`ulum. Tasnif-i Sha`ya ibn Firighun. Tehran, 1972.

Khojiyev, Ilhomjon [Khajiyev, Ilhamjan]

1. Matematicheskiye rukopisi Otdela vostochnykh rukopisey fundamental'noy biblioteki Samarkand. gos. universiteta im. A.Navoi. - IAN Taj. SSR, otd. obshch. nauk. 1983, No 3, 86-95.
2. Tajikskaya matematicheskaya poeziya XVI-XIX vekov. - ADK(fl). Dushanbe, 1984.
2a. Astronomiya i matematika v tajikskoy poezii. - IAI. 24, 1992, 331-351.
3. Mathematical Manuscripts of the Oriental Collection of Central Library of Alisher Navai Samarkand State University. - SHMS. 13, 1994, No 1, 87-96.

al-Khujandi (No 269)

1. Risala fi tashih al-mail wa `ard al-balad. - al-Mashriq. 11, 1908, 60-69.
2. Traktat ob utochnenii naibol'shego skloneniya i shiroty goroda. Per. A.F.Abdulla-zade. - Abdulla-zade and Neghmatov [1], 1986, 81-92.

al-Khumsi, Badi'

1. Urjuza Ibn al-Yasmin fi'l-jabr wa'l-miqabala. - ISHAS 2, 1979, Suppl. 33-35.

Khuri, Ibrahim

1. Fihris makhtutat Dar al-kutub al-Zahiriyya. `Ilm al-hay'a wa mulhaqatuhu. Di-mashq. 1389 h. [1969].

Khwansari, Muhammad Baqir (1811-1895)

1. Rawdat al-jannat fi ahwal al-`ulama wa'l-sadat. Qumm, 1392 s.h. [1972].

al-Khwarizmi (No 41)

1. The Algebra of Mohammed ben Musa. Ed. and transl. by F. Rosen. L., 1831; Hildesheim - N.Y., 1986.
2. Le Messahat de Mohammed ben Moussa, extrait de son Algèbre, trad. A.Marre. - Nouv. Ann. de Math. 5, 1846; Roma, 1866.

3. Kitab sura al-ard min al-mudun wa'l-jibal wa'l-bihar wa'l-jazair wa'l-anhar, istakhrajahu Abu Ja`far Muhammad ibn Musa al-Khwarizmi min kitab Jughrafiya alladhi allafahu Bitlimyus al-Qalaudhi wa qad i`tani bi-nushahi wa tasahhahahu Hans fun Mzhik. - Das Kitab Surat al-ard, des Abu Ğa'far Muhammed ibn Musa al-Khuwarizmi, herausg. nach dem handschr. Unikum des Bibliothèque de l'Université et Régio-nale in Strassburg (Cod. 4247) von Hans v. Mzik. Wina, 1345 h. - Wien, 1926; The Geographical Tables extracted from Kitab Surat al-ard. Ed. by Fuat Sezgin. "Mathematical Geography" [1]. 1992.
4. Muhammad ibn Musa al-Khwarizmi. Kitab al-jabr wa'l-muqabala. Taqdim wa ta`liq duktur `Ali Mustafa Musharrafa wa duktur Muhammad Mursi Ahmad. al-Qahira, 1358 h. [1939], 1388 h. [1968].
5. Muhammad al'-Khorezmi. Matematicheskiye traktaty. Per. Yu.H.Kopelevich i B.A. Rozenfel'da. Tash., 1964.
6. Muhammad ibn Musa Khwarizmi. Jabr wa muqabala. Tarjama-yi Husayn Khidiw Jam. Tehran, 1348 s.h. [1969].
7. Kniga o slozhenii i vychitanii (sokhranivshiyesya fragmenty). Per. Yu.H.Kopelevich, A.P.Yushkevicha i J.ad-Dabbakha. Prim. J.ad-Dabbagha i B.A.Rozenfel'da. - "al-Khwarizmi" [1], 1983, 213-216.
8. Ostroumnyye mysli iz deystviy Muhammada ibn Musy al-Khorezmi - opredeleniye azimuta s pomoshch'yu astrolyabii. Per. J.ad-Dabbakha. Prim. J.al-Dabbakha i B.A.Rozenfe-l'da. - "al-Khwarizmi" [1], 1983, 216-221.
9. Postroyeniye chasov na ploskosti solnechnykh chasov Muhammada ibn Musy al-Khorezmi. Per. J.ad-Dabbakha. Prim. J.ad-Dabbakha i B.A.Rozenfel'da. - "al-Khwarizmi" [1], 1983, 221-234.
10. Kniga istorii (sokhranivshiyesya fragmenty). Per. P.G.Bulgakova, J.ad-Dabbakha i M.A.Sal'ye. Prim. J.ad-Dabbakha i B.A.Rozenfel'da. - "al-Khwarizmi" [1], 1983, 234-260.
11. Iz sochineniy Muhammada al-Khorezmi. Per. i prim. B.A.Rozenfel'da. VIYT, 1983, No 1, 97-108.
12. Matematicheskiye traktaty. Per. i komm. Yu.H.Kopelevich, G.P.Matviyevskoy, B.A.Rozenfel'da i A.P.Yushkevicha, stat'i G.P.Matviyevskoy i A.P.Yushkevicha. Tash., 1983.
13. Astronomicheskiye traktaty. Per., stat'ya i komm. A.Ahmedova. Tash., 1983.
14. Muhammad ibn Musa Khorezmiy. Tanlangan asarlar: matematika, astronomiya, geografiya. Tarjima, maqola, izohlar A. Ahmedovniki. Toshkent, 1983.
15. Muhammad ibni Musa Khorezmi. Risolai jabru muqobala wa Kitob-ul-vasoye. Mu-rattib va muallifi tavzehot I.Khojiyev. Dushanbe, 1984.
16. Kitab sura al-ard. - Jafri and Mal'tsev [1], 1985, 117-132.

"al-Khwarizmi" (memorial collections)

1. Muhammad ibn Musa al-Khorezmi. K 1200-letiyu so dnya rozhdeniya. Otv. red. A.P.Yushkevich. M., 1983.
2. Khorezm i Muhammad al-Khorezmi v mirovoy istorii i kul'ture. Otv. red. N.N.Neghmatov. Dushanbe, 1983.
3. Yadnama-yi Muhammad ibn Musa Khwarizmi. Tehran, 1363 s. h. [1984].
4. Velikiy uchonyy srednevekov'ya al-Khorezmi. Materialy yubileynoy nauchnoy konfe-rentsii, posvyashchennoy 1200-letiyu so dnya pozhdeniya Muhammada ibn Musy al-Khorezmi. Otv. red. M.M.Khayrullayev. Tash., 1985.

al-Khwarizmi (No 274)

1. Mafatih al-`ulum. Liber Mafâtih al-olum explicans vocabula technica scientiarum, auctore Abu Abdallah Mohammed ibn Ahmed ibn Jusof al-Kâtib al-Khowârezmî, ed., indices adjecit G. van Vloten. Lugduni-Batavorum, 1895; Leiden, 1968.
2. Mafatih al-`ulum. al-Qahira, 1342 h. [1924].
3. Mafatih al-`ulum. Tarjama-yi Husayn Khidiw Jam. Tehran, 1348 s. h. [1969].
4. Tretiy traktat iz "Knigi klyuchey nauk". Per. A.D.Sharipova. - "Materialy" [2], 1976, 95-99.

Kiesewetter, R. G.

1. Die Musik der Araber nach Originalquellen dargestellt. Lpz.. 1842; Schaan, Lichtenstein, 1983.

Kiladze, Nina Valerianis assuli

1. al-Ghazali da nisi "Tahafut al-falasifa". - Tbilisi, 1970.
2. al-Ghazali i yego "Tahafut al-falasifa" (Issledovaniye, per. i komm.). ADK(fl). Tbilisi, 1970.

al-Kindi (No 79)

1. Alkindi de pluviis, imbribus et ventis ac aeris mutatione. Venetiis, 1507.
2. Ja'qub ibn Ishaq al-Kindi. Risala fi khubr ta'lif al-alham. Übers. Robert Lachmann und Mahmud el-Hefni. B., 1931.
3. Kitab al-Kindi ila al-Mu`tasim billahi fi'l-falsafa ula. Haqaqahi wa qaddama lahi wa `allaqa `alayhi al-duktur Ahmad Fuad al-Akhwani. al-Qahira, 1367 h. [1948].

4. Kitab kimiya al-itr wa't-tas'idat. Buch über die Chemie des Parfüms und die Distillationen. Üμ bers. von K.Garbers. Lpz., 1948.
5. Rasail al-falsafiyya al-Kindi. Nashara M.A.Abu Rida. 1-2. al-Qahira, 1369-1372 h. [1950-1953].
6. Traktat o kolichestve knig Aristotelya i o tom, chto neobkhodimo dlya usvoyeniya filosofii. O pervoy filosofii. Kniga o pyati sushchnostyakh. Ob"yasneniye blizhney deyst-vuyushchey prichiny vozníknoveniya i unichtozheniya. Per. A.V.Saghadeyeva. - "Izbrannyye proizvedeniya" [1], 1961, 41-132; "Materialy" [2], 1976, 78-84.
7. Risala fi `amal al-sa`at `ala safiha tanassabu `ala'l-sath al-muwazi li'l-ufq. Nashara Zakariya Yusuf. Baghdad, 1382 h. [1962].
8. Risala fi `amal al-suyuf. Nashara Faysal Dabbud. Baghdad, 1382 h. [1962].
8a. Mu`allafat al-Kindi al-musiqiyya. al-Qahira. 1382 h. [1962].
9. The Medieval Formulary or Aqrabadhin. Transl. with a Study of Its Materia Medica by Martin Levey. Madison, 1964.
10. Matarih al-shu`a`. Propagations of Ray: the Older Arabic Manuscript about Optics (Burning-Mirror) from Ya'qub ibn Ishaq al-Kindi. Transl. by M.Y.Haschmi. Aleppo, 1967.
11. Metaphysica. Translation of Ya`qub b. Ishaq al-Kindi's Treatise "On First Philosophy" (Fi al-falsafa al-ula) with Introd. and Comm. by Alfred L.Ivry. Albany, 1974.
11a. Tre trattati. Testi e trad. par Laura Veccia¬ Vaglieri e Giuseppe Celentano. Napoli, 1974.
11b. Cinq épitres. P., 1976.
12. Traktat ob opredeleniyakh i opisaniyakh veshchey. Per. Kh.Janmatovoy. - "Materialy" [2], 1976, 84-92.
13. Kitab fi'l-Sina`a al-`uzma. Ed. by `Azmi Taha al-Sayyid Ahmad. Cyprus. 1987.
14. Oeuvres philosophiques et scientifiques. 1. L'Optique et la Catoptrique. Ed. par R. Rashed. Leiden - N.Y. - Köln, 1996.

al-Kindi (No 79), al-Farabi (No 180), Ibn Bajja (No 436), and Ibn `Adi (No 198)

1. Rasail falsafiyya li-l-Kindi wa'l-Farabi wa Ibn Bajja wa Ibn `Adi. Nashara `Abd al-Rahman Badawi. Beirut, 1983.

King, David Anthony (b. 1941)

1. The Astronomical Works of Ibn Yunus. Doctoral Dissertation. New Haven, 1972.
2. Ibn Yunus' Very Useful Tables for Reckoning Time by the Sun. - AHES. 10, 1973, 343-394; [41], 149-201; [70], No 9.
3. Al-Khalili's Auxiliary Tables for Solving Problems of Spherical Astronomy. - JHA. 4, 1973, 99-110; [41], 212-223, [70], No 11.
4. On Medieval Islamic Multiplication Tables. - HM. 1, 1974, 317-323; [41], 293-299, [70], No 14.
5. A Double-argument Tables for the Lunar Equation Attributed to Ibn Yunus. - Centaurus. 18, 1974, 129-146; [41], 58-75; [70], No 5.
6. An Analog Computer for Solving Problems of Spherical Astronomy: the Shakkaziya Quadrant of Jamal al-Din al-Maridini. - AIHS. 24. 1974, No 95, 219-242; [44], 107-130.
7. Ibn al-Shatir. - DSB. 12, 1975, 357-364.
8. al-Khalili's Qibla Table. - JNES. 34, 1975, 81-122; [41], 250-291; [70], No 13.
9. On the Astronomical Tables of the Islamic Middle Ages. - Studia Copernicana. 13, 1975, 37-56; [41], 7-26; [70], No 2.
10. Ibn Yunus. - DSB. 14, 1976, 574-580.
11. A Fourteenth-century Tunisian Sundial for Regulating the Times of Muslim Prayer. - "Prismata" [1], 1977, 181-202; [44], 294-319.
12. Astronomical Timekeeping in Fourteenth-century Syria. - ISHAS 1. I, 1977, 391-415; II, 1978, 75-84; [41], 202-211; [70], No 10.
13. Astronomical Timekeeping in Ottoman Turkey. - Proc. of the Internat. Symposium on the Observatories in Islam. Istanbul, 1977, 245-269; [41], 224-248; [70], No 12.
14. A Note on the Astrolabist Nastulus [Bastulus]. - AIHS. 28, 1978, No 102, 117-120; [44], 69-72.
15. al-Khalili. - DSB. 15, 1978, 259-260.
16. Three Sundials from Islamic Andalusia. - JHAS. 2, 1978, No 2, 358-392; [44], 226-260.
17. Mathematical Astronomy in Medieval Yemen. - Arabian Studies. 5, 1979, 61-65; [41], 52-56; [70], No 4.
18. Supplementary Notes on Medieval Islamic Multiplication Tables. - HM. 6, No 4, 1979, 405-417; [41], 300-312; [70], No 15.
19. An Islamic Astronomical Instrument. - JHA. 10, 1979, No 1, 51-53; [44], 216-218.
20. Ibn Yunus and the Pendulum: a History of Errors. - AIHS. 29, 1979, No 104, 35-52.; abridgement: [44], 320-323.
20a. Kibla. - EI^2. 5, 1979, 85-91.

21. On the Early History on the Universal Astrolabe in Islamic Astronomy and the Origin of the Term "Shakkaziya" in Medieval Scientific Arabic. - JHAS. 3, 1979, No 2, 244-257; [44], 87-100.
22. The Astronomical Instruments of Ibn al-Sarraj. al-Alat Ibn al-Sarraj al-falakiyya - ISHAS 2, 1979, Suppl. 71, 108.
23. A Handlist of the Arabic and Persian Astronomical Manuscripts in the Maharaja Mansingh II Library in Jaipur. - JHAS. 4, 1980, No 1, 81-86; [41], 313-318; [70], No 16.
24. Some Reflections on the History of Islamic Astronomy. - Bull. of the Middle East Studies Association of North America. 4. 1980, 10-26; [41], 2-6; [70], No 1.
25. New Light on the Zij al-Safa'ih of Abu Ja`far al-Khazin. - Centaurus. 23, 1980, 105-117; [44], 132-144.
26. Universal Solutions in Medieval Islamic Astronomy. - ACIHS XVI, 1, 1981, 144;.
27. Islamic Astronomical Instruments and the Transmission of Ideas. - ACIHS XVI, 2, 1981, 620.
28. David A.King. Fihris al-makhtutat al-`ilmiyya al-mahfuza bi-Dar al-kutub al-Misriyya. A Catalogue of the Scientific Manuscripts in the Egyptian National Library. al-Qahira - Cairo, 1981 (FMI).
29. The Origin of the Astrolabe according to Medieval Islamic Sources. JHAS. 5, 1981, No 1, 43-83; [44], 28-68.
30. Mathematical Astronomy in Medieval Yemen: a Bibliographical Survey. Malibu, 1983 (MAY).
31. The Astronomy of Mamluks. - Isis. 74, 1983, 531-555; [41], 27-51; [70], No 3.
32. Al-Khwarizmi and New Trends in Mathematical Astronomy in the Ninth Century. N.Y., 1983.
33. Al-Bazdawi on the Qibla in Early Islamic Transoxiana. - JHAS. 7, 1983, 3-38.
34. Astronomical Alignments in Medieval Islamic Religious Architecture. - Ann. of the New York Acad. of Sciences. 385, 1983, 303-312.
35. Architecture and Astronomy: the Ventilators of Cairo and their Secrets. - JAOS. 104, 1984, 97-133.
36. Pyat' malykh traktatov al-Khorezmi: novyye tendentsii v matematicheskoy astronomii v IX v. - "al-Khwarizmi" [4], 1985, 91-95.
37. The Medieval Yemeni Astrolabe in the Metropolitan Museum of Art in New York City. - ZGAIW. 2, 1985, 99-122; [44], 4-27.
38. Osmanische astronomische Handschriften und Instrumente. - "Türkische Kunst und Kultur der osmanischen Zeit". II, 1985, 373-378.
39. The Sacred Direction in Medieval Islam: a Study of the Interaction of Science and Religion in the Middle Ages. - Interdisciplinary Science Reviews. 10, 1985, 315-328.
40. A Survey of the Scientific Manuscripts in the Egyptian National Library. Winona Lake, Indiana, 1986 (SSM).
41. Islamic Mathematical Astronomy. L., 1986.
42. The Earliest Islamic Mathematical Methods and Tables for Finding the Direction of Mecca. - ZGAIW. 3, 1986, 82-146; corr.: 4, 1987.
43. Qibla. - EI². 5, 1986, 82-88.
44. Islamic Astronomical Instruments. L., 1987.
45. Astronomical Instrumentation in the Medieval Near East. - [44], 2-22.
46. The Astrolabe of `Ali al-Wada`i. - [44], 101-103.
47. The Astronomical Instruments of Ibn al-Sarraj: a Brief Survey. - [44], 104-106.
48. Some Early Islamic Tables for Determining Lunar Crescent Visibility. - "From Deferent to Equant" [1], 1987, 185-225.
49. Universal Solutions in Islamic Astronomy. - Copenhagen, 1987, 121-132..
49a. A Medieval Arabic Report on Algebra before al-Khwarizmi. - Al-Masaq. Studia Arabo-Islamica Mediterranea. 1, 1988, 25-32.
50. A Survey of Medieval Islamic Shadow Schemes for Simple Time Reckoning. - ZGAIW. 4, 1987; Oriens. 32, 1990, 191-249.
51. Universal Solutions to Problems of Spherical Astronomy from Mamluk Egypt and Syria. - "Islam and Society", 1988, 153-184.
52. al-Marrakushi. - EI². 6, 1990, 598.
53. Towards a Classification of Islamic Astronomical Tables. - ACIHS XVIII. 1989, P2, 13.
54. An Oberview of the Sources for the History of Astronomy in Medieval Maghrib. - Actes du deuxième colloque maghrebin sur l'histoire mathématiques arabes. Tunis, 1990, 125-157.
55. Between Europe and China. Aspects of the Astronomical Traditions of the Lands of Islam. - "Dall' Europa alla Cina", 1990, 55-66.
56. Astronomy. - "Religion, Learning, and Science", 1990, 274,-289.
57. Astronomy in Medieval Yemen. - "Yemen", 1990, 300-308.
58. Die Sterne weissen nach Mekka. Arabische Astronomie im Dienste des Islam. - "Scheibe, Kugel", 1990, 104-117.

59. Lunar Crescent Visibility Predictions in Medieval Islamic Ephemerides. - "Quest for Understanding", 1991, 233-251.
60. Medieval Astronomical Instruments. A Catalogue in Preparation. - Bull. of the Scientific Instruments Society. 31, 1991, 3-7.
61. Strumentazione astronomica nel mondo medievale islamico. - "Strumenti", 1991, 154-189, 581-585.
62. Science in the Service of Religion: the Case of Islam. - Impact of Science of Society (Unesco). 159, 1991, 245-262.
62a. Nauka na sluzhbe religii: primer islama. - Impakt - Nauka i obshchestvo (Unesco). 1991, No 3, 69-87.
63. Los cuadrantes solares andalucies. - "Legado cientifico", 1992, 89-102.
64. Andalucian Astronomical Instruments. - "Al-Andalus", 1992, 376-383.
65. Some Remarks on Islamic Astronomical Instruments. - Scientiarum Historia. 18, 1992, 5-23.
66. Astronomical Instruments between East and West. - Medium aevum quotidianum. 27, 1992, 125-130.
67. Some Remarks on Islamic Astronomical Manuscripts and Instruments, and Past, Present and Future Research. - "Significance", 1992, 115-144.
68. Astronomy in the Service of Islam. Aldershot, 1993.
69. L'astronomie en Syrie à l'époque islamique. - "Syrie. Mémoire et Civilisation", 1993, 186-195.
70. Islamic Mathematical Astronomy. Revised edition. Aldershot, 1993.
71. The Orientation of Medieval Islamic Religious Architecture and Cities. - JHA. 26, 1995, No 3, 253-274.
72. Astronomy and Islamic Society: Qibla, Gnomonics and Timekeeping. - EHAS. I, 1996, 128-184.
73. Astronomical Instruments in the Islamic World. - ENWC. 1997, 86-88.
74. Astronomy in the Islamic World. - ENWC. 1997, 125-133.
75. Ibn Shatir. - ENWC. 1997, 412-413.
76. Ibn Yunus. - ENWC. 1997, 438-439.
77. Map and Mapmaking: Islamic World Maps Centered on Mecca. - ENWC. 1997, 577-578
78. Al-Maridini, Jama al-Din and Badr al-Din. - ENWC. 1997, 601-602.
79. Religion and Science in Islam: Technical and Practical Aspects. - ENWC. 1997, 857-861.

King, D. A. and Gingerich, O.

1. Some Astronomical Observations from Thirteenth-century Egypt. - JHA. 13, 1982, No 2, 121-128; King [43], 1986, 97-104; [72], No 7.

King, D. A. and Hartner, W.

1. Ibn Yunis and Meridian Degree. - Centaurus. 26, 1982-1983, 217-218.

King, D.A. and Kennedy E.S.

1. The al-Majdi's Tables for Calculating Ephemerides. - JHAS. 4, 1980, No 1, 48-68.

King, D. A. and Kunitzsch, P.

1. Nastulus the Astrolabist Once Again. - AIHS. 33, 1983, No 111, 342-343; King [34], 1987, 73-74.

King, D. A. and Lorch, R.

1. Qibla Charts, Qibla Maps, and Related Instruments. - "Cartography", 1992, 189-205.

Klamroth, M.

1. Ueber die Anuszüge aus griechischen Schriftstellern bei al-Ja'qubî. IV. Mathematiker und Astronomen. - ZDMG. 42, 1888, 1-44.

Klein-Franke, Felix

1. Die Ursachen der Krisen bei akuten Krankheiten. Eine wiederentdeckte Schrift al-Kindi's. - Israel Oriental Studies. 5, 1975, 161-188.
2. Iatromathematics in Islam. A Study on Yuhanna Ibn as-Salt's Book on Astrological Medicine. Hildesheim, 1984.

Knecht, Pierre

1. Libri astronomici di Alfonso X in una versione fiorentina del trecento. Zaragoza, 1965.

Knobel, E. B.

1. The Chronology of Star Catalogues. - Memoirs of the Royal Astronomical Society, 43, 1875-1877, 1-74.

Knobloch, Eberhard Heinrich (b. 1943)

1. Zur Rezeption der arabischen Astronomie im 15. und 16. Jahrhundert. - History of Mathematics. 1996, 237-261.

Köbert, R.

1. Die Einführung Bîrunîs zu seinem Verzeichnis der Schriften Râzîs (Übersetzung). - Orientalia. 27, 1958, 198-202.

Kohl, K.

1. Zu Ibn al-Haithams Optik. - AGNT. 3, 1910.
2. Über den Aufbau der Welt nach Ibn al-Haitham. - SBPMS. 54-55, 1922-1923, 140-179.
3. Zur Geschichte der Dreiteilung des Winkels. - SBPMS. 54-55, 1922-1923, 180-189.
4. Über das Licht des Mondes. Eine Untersuchung von Ibn al-Haitham. - SBPMS. 54-55, 1922-1923, 305-398.

Kohlberg, Etan

1. Baha al-Din `Ameli. - EIr. 3, 1988, 429-430.

Koikylides, K. M.

1. Katalogos Arabikon cheirographon tes Hierosolimitikes bibliothekes. Hierosolymos, 1901.

Kolchin, Boris Aleksandrovich

1. Neskol'ko zamechaniy k glave "O zheleze" mineralogicheskogo traktata Biruni. - Kratkiye soobshcheniya o dokladakh i polevykh issledovaniyakh Instituta istorii material'noy kul'tury Akademii nauk SSSR. 32, 1950, 145-151.

Kolman, Arnost [Ernest] (1892-1985)

1. L'anticipation de certaines idées de la logique mathématique chez al-Farabi. - ACIHS XII (Paris, 1969). 3A, 1871, 87.

Kolpakov, A. P.

1. O rabote Abuali Ibn Siny "Ilmi tabiy" (Fizika ili 'Nauka o prirode'). - IAN Taj. SSR., otd. obshch. nauk. 1957, No 12, 45-52.

Komilov, Abdulhayy Sh.

1. Fizicheskaya chast' traktata Ibn Siny "Kurozoi tabiyyot". Dushanbe, 1990.
2. Problems of Physics in the Works of ar-Razi and Ibn-Sina. - ACIHS XX, 1997, 50.

Koning, Pieter de

1. Traité sur les calculs dans les reins et dans la vessie par Abu Bekr al-Razi', `Ali ibn al-`Abbas, `Ali ibn al-Habal, Avicenne et Abulcasis. Leyde, 1896; 1905; 1981; reéd. par Fuat Sezgin avec introduction en français et arabe. F.M., 1986.
2. Trois traités d'anatomie Arabes par Muhammad ibn Zakariyya al-Razi, `Ali ibn al-`Abbas et `Ali ibn Sina. Leyde, 1903; réédition par Fuat Sezgin avec introduction en français et arabe. F.M., 1986.

Kopf, L.

1. The Book of Animals (kitab al-Hayawan) of al-Jahiz (ca 767-868). - ACIBS VII (Jerusalem, 1953), 1954, 395-401.

Köprülü, Fuat

1. Marağa Rasathanesi. - TTKB. 6, 1942, 208-220.
2. Bâbur. - IA. 2, 1952, 181-187.
3. Beyhakî.- IA. 2, 1952, 584-586).

Koribaa, Nabhani

1. Les philosophes d'Islam. Alger, 1980.

Kostygova, Galina Ivanovna

1. Persidskiye i tajikskiye rukopisi novoy serii Gos. Publichnoy biblioteki. Lg., 1973.

Kovalevskiy, Andrey Petrovich (1895-1969)

1. Opisaniye vostochnykh rukopisey Tsentral'noy biblioteki Khar'kovskogo Universite-ta. - Bibliografiya Vostoka. M.-Lg., 7, 1934, 93-115.

Kozhukhova, Galina Mikhaylovna (b. 1946).

1. Arabskaya versiya "Izmereniya kruga" Arkhimeda. - IMI. 25, 1980, 315-316.

Krachkovskiy, Ignatiy Yulianovich (1883-1951)

1. Arabskiye rukopisi, postypivshiye v Aziatskiy Muzey Rossiyskoy Akademii nauk s Kavkazskogo fronta. - Izv. Ross. AN (6). 2, 1917, No 2, 913-949; Izbrannyye sochineniya. 6, 1960.
2. Kolumbovskaya karta Ameriki v turetskoy obrabotke. - Izv. gos. geograf. ob-shchestva. 66, 1934, 184-186.
3. Dagestan i Yemen. - Sbornik pamyati akad. N.Ya.Marra. 1938, 358-368; Izbrannyye sochineniya. 6. 1960, 574-584.
4. Matematicheskaya geografiya u arabov (ot al-Khorizmi do Ulugbeka). - Nauchnoye nasledstvo. Yest.-nauch. seriya. I. M.-Lg., 1948.
5. Arabskaya literatyra na Severnom Kavkaze. - IAN SSSR, otd. yaz. i lit. 7, 1948, No 1, 13-24; Izbrannyye sochineniya. 6, 609-622.
5. Biruni i yego rol' v istorii geografii. - "al-Biruni" [1], 1950, 55-73.
6. Turetskiy pervopechatnik Ibrahim Mutafarrika i yego raboty po geografii. - Tyurkologicheskiy sbornik. I. M.-Lg., 1951, 120-126.
7. Arabskaya geograficheskaya literatura. - Izbrannyye sochineniya. 4. M.-Lg., 1957 (AGL).
8. Ta'rikh al-adab al-jughrafi al-`arabi. Naqala Salah al-Din `Uthman Hashim. al-Qahira, 1963.

Krafft, Fritz (b. 1935)

1. Averroes. - GWG. 1986, 32-33.
2. Avicenna. - GWG. 1986, 33-34.
3. al-Battani. - GWG. 1986, 38-39.
4. al-Biruni. - GWG. 1986, 51-52.
5. Haitham, Ibn al-. GWG. 1986, 154.
6. Thabit ibn Kurra. - GWG. 1986, 325-326.

Krafft, H.

1. Die arabischen, persischen und türkischen Handschriften der Kais.-Königl. Orientalischen Akademie zu Wien. Wien, 1842.

Kramar, Feodosiy Dement'yevich (1910-1980)

1. Ob issledovaniyakh Omara Khayyama i Nasireddina Tusi po teorii parallel'nykh li-niy. Alma-ata, 1964.

Kramers, Johannes Hendrik (1891-1951)

1. La question Balhi - Istahri - Ibn Haukal et "l'Atlas de l'Islam". - Acta Orientalia. 10 (1931-32), 9-30; "Studies o Ibn Hauqal and al-Istahri" [1], 1992, 326-347.

1a. al-Mukaddasi. - EI. 3, 708-709.

2. Munadjdjim Bashi. - EI. 3, 1936, 722.
3. Djughrafiya. - EI. 5, 1938, 62-75; "Islamic Geography", 1992, 421-436.
4. Al Biruni's Determination of Geographical Longitude by Measuring the Distance. - "al-Biruni" [4], 1951, 177-193.
5. Râzî. - IA. 9, 1966, 645-646.

Krasnova [Bokatuyeva], Svetlana Aleksandrovna (b. 1937)

1. Geometricheskiye postroyeniya na Blizhnem i Srednem Vostoke v sredniye veka. ADK (fm). M., 1965.
2. Geometricheskiye postroyeniya na sfere v stranakh islama. - VIYT. 18, 1965, 111-113.
3. Geometricheskiye postroyeniya na srednevekovom Vostoke. - Voprosy istorii i metodiki elementarnoy matematiki. 2. Dushanbe, 1965, 78-94.
4. K istorii geometricheskikh postroyeniy. - Uch. zap. Kolomenskogo ped. instituta, 8, 1965, 184-204.
5. Postroyeniye konicheskikh secheniy na srednevekovom Vostoke. - IMEN. 5, 1966, 140-149.
6. Geometricheskiye postroyeniya v trudakh uchonykh srednevekovogo Blizhnego i Srednego Vostoka. - FMSB. 1966, 42-55.

Krasnova, S.A. and Tagi-zade, A.K.

1. O matematicheskikh traktatakh Sharaf al-Dina al-Tusi. - TNKA. XVII (m), 1978, 60-72.

Kraus, Paul (1902-1944)

1. Dschabir ibn Hajjan und die Isma'ilijja. - Dritter Jahresbericht des Forschungs Instituts für Geschichte der Naturwissenschaften in Berlin. B., 1930.

2. Studien zu Jabir ibn Hayyan. - 15. 1931, 7-30.
3. Raziana. - Orientalia. 4, 1935, 300-310; 5, 1936, 35-45.
4. Jabir ibn Hayyan. Essai sur l'histoire des idées scientifiques dans l'islam. 1-2, P. - Le Caire, 1935.
5. Jabir ibn Hayyan. Contribution à l'histoire des idées scientiques dans l'Islam. 1. Le corpus des écrits jabiriens. 2. Jabir et la science greeque. Le Caire, 1942-1943; P., 1986.

Kraus, P. and Pines, S.

1. al-Razi. - EI. 3, 1934, 1134-1136.
2. Râzî. - IA. 9, 1966, 642-645.

Kraus, P. and Plessner, M.

1. Djabir b. Hajjan. - EI^2. 2, 1965, 357-359.

Krause, Max (1909-1944)

1. Stambuler Handschriften islamischer Mathematiker. - QS(B). 3, 1936, 437-532; "Handschriften" [1], 2, 683-778 (SHIM).
2. Die Spharik von Menelaos aus Alexandrien in der Verbesserung von Abu Nasr Mansur b. 'Ali b. 'Iraq, mit Untersuchungen zur Geschichte des Textes bei den islamischen Mathematikern. B., 1936.
3. Al-Biruni, ein Iranischer Forscher des Mittelalter. - Der Islam. 26, 1940, 1-15.

Krek, Miroslav

1. A Catalogue of Arabic Manuscripts in the Oriental Institute in Chicago. New Haven, 1961.

Krenkow, Fritz (1872-1953)

1. Abu'R-Raihan al-Biruni. - Islamic Culture. 6, 1932, No 4, 528-534.
1a. al-Sabi'. - EI. 4, 1934, 19-21.
2. Sirafi. - EI. 4, 1934, 477-478.
3. The Miftâh as-sa'âdah of Tâsh Köprü Zâdah. - Islamic Culture. 9, 1935, No 4, 632-634.
4. Sîrâfî. - IA. 10, 1966, 696-698.

Kubbel', Lev Yevgen'yevich and Matveyev, Viktor dVladimirovich

1. Arabskiye istochniki VII-X vekov po etnografii i istopii Afriki yuzhneye Sahary. Teksty i perevody. M.-Lg., 1960.
2. Arabskiye istochniki X-XII vekov po etnografii i istorii Afriki yuzhneye Sahary. Teksty i perevody. M.-Lg., 1965.

Kubesov [Köbesov], Audanbek Kubesovich

1. Bizding uly jerlesimiz - Abunäsir äl-Farabi. - Bilim jäne engbek, 1961, No 6, 22-23.
2. Infinitezimal'nye metody Nasireddina Tusi. - IAN Azerb. SSR., ser. fiz.-mat. i tekhn. nauk. No 4, 1963, 147-152.
3. Kommentarii Nasir ad-Dina at-Tusi k sochineniyu Arkhimeda "O share i tsilindre". - Vestnik AN Kazakh. SSR., 1963, No 6, 66-70.
4. Razvitiye idey Arkhimeda v rabotakh Nasir ad-Dina at-Tusi. ADK (fm). M., 1963.
5. Farabi jäne matematika. - Bilim jäne engbek. 1967, No 1, 10-12.
6. Al-Farabiding astrologiyalyq traktaty. - Bilim jäne engbek. 1968, No 1, 16-19.
7. Farabiding trigonometriyasy. - Bilim jäne engbek. 1969, No 1, 22-24.
8. Farabiding geometriyalyq traktaty. - Bilim jäne engbek. 1969, No 7, 7-9.
9. O kommentariyakh Nasir ad-Dina al-Tusi k traktatu Arkhimeda "O share i tsi-lindre". - VIYT. 1969, No 2 (27), 23-28.
10. Farabiding ghylym jasaw ädisi. - Bilim jäne engbek, 1970, No 1, 21-23.
11. Al-Farabi. Alma-ata, 1971.
12. Traktat al-Farabi o geometricheskikh postroyeniyakh. - VIYT, 1971, No 2(35), 39-40.
13. Geometriya i trigonometriya al-Farabi. - ACIHS XIII. Materialy po istorii fiz.-mat. nauk. M., 1971, 23.
14. Senbes jüldyzdar. Alma-ata, 1973.
15. Matematicheskoye naslediye al'-Farabi. Alma-Ata, 1974.
16. Al'-Farabi i yego obrabotka "Al'magesta". - al-Farabi [23], 1975, 7-45.
17. Vydayushchiysya teoretik yestestvoznaniya srednevekov'ya. - "al-Farabi" [2], 1975, 128-135.
18. Ucheniye al'-Farabi o trigonometricheskikh liniyakh. - "al-Farabi" [4], 1975, 46-48.
19. Al-Farabi i Abu'l-Wafa. - Tezisy dokladov III vsesoyuz. nauchnoy konf. po istorii fiz.-mat. nauk. Tbilisi, 1978, 35-36.

20. Astronomiya v trudakh al'-Farabi. Alma-Ata, 1981.

Kubesov, A. and Janibekov, Ye.

1. Farabiding fizikalyq traktaty. - Bilim jäne enghek. 1969, No 3, 4-5.

Kubesov, A. and Rosenfeld B. A.

1. On the Geometrical Treatise of al-Farabi. - AIHS. 1969, No 86-87, 50.
2. Primechaniya k "Kommentariyam k ""Al'magestu" Ptolemeya" al'-Farabi. - al-Farabi [23], 351-452.

Kufrali, Kasim

1. Gazzâlî. IA. 4, 1956, 748-760.

Kunitzsch, Paul (b. 1930)

1. Bawl Kunitsh. al-Falak - al-tanjim - al-miqat. - Jami`a al-duwal al-`arabiyya. Ma`-had al-makhtutat al-`arabiyya. Fihrist al-makhtutat al-musawwara. 3. al-`Ulum, No 1. al-Qahira, 1958.
2. Arabische Sternnamen in Europa. Wiesbaden, 1959.
3. Untersuchungen zur Sternnomenklatur der Araber. Wiesbaden, 1961.
4. Sufi Latinus. - ZDMG. 115, 1965, 65-74.
5. Typen von Sternverzeichnissen in astronomischen Handschriften des zehnten bis vierzehnten Jahrhunderts. Wiesbaden, 1966.
6. Zur Stellung der Nautikertexte innerhalb der Sternnomenklatur der Araber. - Der Islam. 43, 1967, 53-70.
7. Die arabische Herkunft von zwei Sterrnverzeichnissen. - ZDMG. 120, 1970, No 2, 281-289; [37].
8. Abu Ma`sar, Johannes Hispalensis und Alkameluz. - ZDMG. 120, No 1, 1970, 103-125; [37].
9. Die arabischen Sternbilder des Südhimmels. - Der Islam. 51, 1974, 37-54; 52, 1975, 263-277.
10. New Light on al-Battani's Zij. - Centaurus. 18, 1974, 270-274; [32].
11. Der Almagest. Die Syntaxis Mathematica in arabisch-lateinischer Überlieferung. Wiesbaden, 1974.
12. Ibn Qutayba. - DSB. 11, 1975, 246-247.
13. al-Sufi. - DSB. 13, 1976, 149-150.
14. Über einige Spuren der syrischen Almagestübersetzung. - 1977, 203-210.
15. On the Mediaeval Arabic Knowledge of the Star Alpha Eridani. - JHAS. 1, 1977, No 2, 263-267.
16. Mittelalterische astronomisch-astrologische Glossare mit arabischen Fachausdrücken. München, 1977.
17. Arabic Criticism of Ancient Greek Traditions: Ibn al-Salah and the "Almagest". - ISHAS 1. I, 1977, 389-390; II, 1978, 85-90.
18. Zur Sternkunde der arabischen Nautiker. - Der Islam. 56, 1979, No 2, 305-311.
19. Observations of the Arabic Reception of the Astrolabe. Mulahazat `an asturlab `inda al-`arab. - ISHAS 2, 1979, 64, Suppl. 70.
20. Two Star Tables from Muslim Spain. - JHA. 11, 1980, 192-201.
21. Abu Mas`ar. - LM. 1, 1981, 70.
22. On the Authenticity of the Treatise on the Composition and Use of the Astrolabe Ascribed to Mesahalla. - AIHS. 31, 1981, No 106, 42-62.
23. Observations on the Arabic Reception of the Astrolabe. - AIHS. 31, 1981, No 107, 243-252.
24. The 'Description of the Night' in Ǧurgani's Vis u Ramin. - Der Islam. 59, 1982, No 1, 93-110.
25. 'Abd-al-Rahman b. 'Omar Sufi, Abu'l-Husayn. - EIr. 1, 1982, 148-149.
26. Über eine anwa'-Tradition mit bisher unbekannten Sternnamen. München, 1983.
27. Remarks Regarding the Terminology of the Astrolabe. - ZGAIW. 1, 1984, 55-60.
28. Novoye o nauchnom nasledii al-Khorezmi. - "al-Khwarizmi" [4], 1885, 121-122.

28a. Findings in Some Texts of Euclid's "Elements" (Mediaeval Transmission, Arabo-Latin). - "Mathemata", 1985, 116-128.

29. Star Catalogues and Star Tables in Mediaeval Oriental and European Astronomy. - IJHS. 21 (2), 1986, 113-122.

29a. Der Sternkatalog des Almagest. Die arabisch-mittelalterische Tradition. Wiesbaden, 1986.

30. The Star Catalogue Commonly Appended to the Alfonsine Tables. - JHA. 17, 1986, 89-98.
31. The Astronomer Abu'l-Husayn al-Sufi and His Book on the Constellations. - ZGAIW. 3, 1986, 56-81.
32. Peter Apian und Azophi: arabische Sternbilder in Ingolstadt im frühem 16. Jahrhundert. München, 1986.
33. Peter Apian and Azophi: Arabic Constellations in Renaissance Astronomy. - JHA. 18, 1986, 1097.

33a. al-Madjarra. - EI^2. 5, 1986, 1024-1025.

34. Al-Khwarizmi as a Source for the "Sententie astrolabii". - "From Deferent to Equant" [1], 1987, 227-236.
35. Harakata t-Targama ila l-`arabiya wa-min al-`arabiya wa-ahammiyatuhuma fi ta'rih al-fikr [Die beiden Übersetzungsbewegungen ins Arabische und aus dem Arabischen und ihre Bedeutung für die Geistesgeschichte]. - ZGAIW. 4, 1987/88.

36. al-Manazil. - EI². 6, 1988, 374-376.
37. The Arabs and the Stars. Texts and Traditions on the Fixed Stars and Their Influence in Medieval Europe. München, 1989.
37a. The Astrolabe Stars of al-Sufi. - Astrolabica. 5, 1989, 7-14.
38. Claudius Ptolemäus. Der Sternlatalog des Almagest. Die arabisch-lateinische Tradition. 1-3: Wiesbaden, 1990-1991.
39. Mintakat al-burudj. - EI². 7, 1990, 81-87.
40. Al-Sufi and the Astrolabe Stars. ZGAIW. 6. 1990, 151-166.
41. Die Überlieferung des Almagest griechisch-arabisch-lateinisch. - "Lingua restituta orientalis", Festgabe für Julius Assfalg, 1990, 203-210.
42. Von Alexandria über Bagdad nach Toledo. - Sitzungsber. der Bayer. Akad. der Wiss, phil.-hist. Kl. 1991. No 1.
42a. Athar al-Sufi fi'l-sharq wa'l-gharb. - Muhadarat mu`tamar al-Sufi wa Ibn al-Nafis. Beirut - Dimashq, 1991, 206-224.
43. Mashallah. - LM. 6, 1992, 2.
44. al-Nudjum. - EI². 8, 1993, 97-105.
45. Arabische Astronomie im 8. bis 10. Jahrhundert. - "Science in Carolingian Times", 1993, 205-220.
46. The Second Arabic Manuscript of Ptolemy's "Planisphaerium". - ZGAIW. 9, 1994, 83-90.
47. The Arabic Nomenclature on Coronelli's 110 cn Celestial Globes. - ZGAIW. 9, 1994, 91-98.
48. `Abd al-Malik al-Habib's Book on the Stars. - ZGAIW. 9, 1994, 161-194.
49. The role of al-Andalus in the Transmission of Ptolemy's "Planisphaerium" and "Almagest". - ZGAIW. 10, 1995/96, 147-155.
50. Almagest: Its Reception and Transmission in the Islamic World. - ENWC. 1997, 55-56.
51. Lunar Mansions in Islamic Astronomy. - ENWC. 1997, 520.
52. Al-Ma'mun. - ENWC. 1997, 548-549.
53. Stars in Arabic-Islamic Science. - ENWC. 1997, 910-911.
54. Al-Sufi. - ENWC. 1997, 915.
55. Zodiac in Islamic Astronomy. - ENWC. 1997, 1059-1060.

Kunizsch, P. and Lorch, R.

1. Abu Nasr and Habash on matali` al-samt. ZGAIW. 9, 1994, 43-82.
2. Maslama's Notes on Ptolemy's "Planispherium" and Related Texts. München, 1994.

Kunitzsch, P. and Smart, Tim

1. Short Guide to Modern Star Names and Their Derivation. Wiesbaden, 1986.

Kuran, E.

1. Khodja Ishaq Efendi. - EI². 4, 1973, 112-113.

Kurtik, Gennadiy Yevseyevich

1. Modeli trepidatsii Sabita ibn Korry. - TNKA (m). 20-22, 1981, 92-99.
2. Pretsessiya v zvyozdnom kataloge al-Sufi. - TNKA (f). 23, 1982, 26-30.
3. O proiskhozhdenii znacheniy srednikh dvizheniy planet v "Proverennom zije" Yah'i ibn Abi Mansura. - TNKA (f). 27, 1984, 84-89.
4. Teoriya pretsessii v antichnoy i srednevekovoy nauke. - ADK(fm). M., 1984.
5. Teoriya voskhozhdeniya i niskhozhdeniya Sabita ibn Korry. - IAI. 18, 1985, 111-150.
6. Teoriya pretsessii v srednevekovoy indiyskoy i ranney islamskoy astronomii. M., 1987.

Kushakova, Guzal' Kuchkar qizi

1. Traktaty al-Karaji i al-Jazari po prakticheskoy mekhanike. - TNKA XVII(m), 1975, 79-82.

al-Kutubi (No 740)

1. Muhammad ibn Shakir al-Kutubi. Fawat al-wafayat. al-Qahira, 1283 h. [1866], 1299 h. [1882], 1370 h. [1951].

al-Kutubi, Zahir

1. Ibn al-Haytham. Dimashq, 1972.

Labarta, A. and Barcelo, C.

1. Numeros y cifras en los documentos arabigo-hispanos. Cordoba, 1988.

Lagumina, B.

1. Catalogo dei codici orientali arabi della Biblioteca nazionale di Palermo. - "Cataloghi" [1], 4, 1889, 375-402.

al-Lahuri (No 1181)

1. Tarjama-yi shash maqala-yi Kitab-i tahrir-i Uqlidis. Kalkata, 1824.

Lamb, Harold

1. Babur the Tiger: First of the Great Moguls. N.Y., 1961.

Lammens, Henri (1862-1937)

1. Djabir b. Haiyan. - EI. 1, 1913, 1029-1031.

Landauer, S.

1. Die Psychologie des Ibn Sînâ. - ZDMG. 29, 1875, 335-418.
2. Katalog der hebraischen, arabischen, persischen und türkischen Handschriften der Kais. Universitats- und Landes-bibliotek zu Strassburg. Strassburg, 1881.

Landauer, S. and Horn, P.

1. Die Handschriften der Hof- und Landes-bibliotek in Karlsruhe. 2. Orientalische Handschriften. Karlsruhe, 1892; "Handschriften" [2]. 3, 1987, 49-64.

Lane-Poole, Stanley

1. The Mohammedan Dynasties. Chronological Genealogical Tables with Historical Introductions. L., 1894; N.Y., 1965.
2. Baber. Ox., 1899.
3. Musul'manskiye dinastii. Khronologicheskiye i genealogicheskite tablitsy s istoriches-kimi vvedeniyami. Perevod s prilozeniyami i dopolneniyami V.Bartol'da, SPb, 1899.
4. The Brotherhood of Purity. Lahore, 1960.

Langermann, Yitzhak Tzvi

1. The Mathematical Writings of Maimonides. - The Jewish Quaterly Review, 75, 1984, No 1, 57-85.
2. The Book of Bodies and Distances of Habash al-Hasib. - Centaurus. 28, 1985, 108-128.
3. Ibn al-Haytham's "On the Configuration of the World". With the Arabic Text. N.Y.- L., 1990.
4. Abu'l-Barakat. - ENWC. 1997, 6-7.
5. Moses Maimonides. - ENWC. 1997, 744-745.

Largy, Simon

1. La musique populaire du Proche-Orient arabe. - "Histoire de la musique", 1960, 545-571.

al-Lari (No 994)

1. Muslih ad-Dîn Ansari. Kommentarii k astronomicheskomu traktatu "Risala dar falakiyat" Ali Kushchi. Per. A.U.Usmanova. Samarkand, 1971.

Latham, J. D.

1. Ibn Rushd. - EI^2, Sup. 1982, 397-398.

Latif, Malik

1. Abu'l-Rayhan al-Biruni. Lahur, 1965.

Lay, Juliano

1. L'Abrégé d'Almageste: un inédit d'Averroes en version hébraïque. - ASP. 6, 1996, No 1, 5-6, 23-51.

Leaman, Oliver

1. Nasir al-Din al-Tusi's al-Tadhkirah: A Cathegory of Islamic Astronomical Literature. - Centaurus. 17, 1972, 260-275.
2. Introduction to medieval Islamic philosophy. Cambridge, 1985.
3. Averroes and His Philosophy. Ox. 1988.

Leclerc, Lucien

1. Histoire de la médecine arabe. 1-2. P., 1876; N.Y., 1964 (HMA).

Lecomte, Gérard

1. Ibn Qutayba (mort en 276/889). L'homme, son œuvre, ses idées. Thèse. Damas, 1965.
2. Ibn Qutayba. - EI^2. 3, 1971, 844-847.

Lee, S.

1. Notice of the Astronomical Tables of Mohammed Abibekr al-Farsi. - Transactions of the Cambridge Philos. Society. 1, 1822, 249-268.

"Legado cientifico"

1. Legado cientifico Andalusi. Ed. J.Vernet, J.Samso y al. Madrid, 1992.

Lehmann, F.

1. Babor Zahir al-Din Mohammed. EIr. 3, 1988, 320-323.

Lelewel, Joachim (1786-1861)

1. Géographie du Moyen Age. 1-4. Bruxelles, 1850-1857; rééd. par Fuat Sezgin, F.M., 1993.

Lemay, Richard

1. Abu Ma'shar and Latin Aristotelism in the Twelth Century. The Recovery of Aristotle's Natural Philosophy through Arabic Astrology. Beirut, 1962.
2. Fautes et contresens dans les traductions arabo-latines médiévales: l'Introductorium in astronomiam d'Abou Ma`shar de Balkh. - ACIBS XII (Paris, 1968). 1A. Colloques. P., 1968, 101-124; 1B. Discourse et conférences colloques. P., 1971, 105-113.
3. Origin and Success of the Kitab Thamara of Abu Ja`far Ahmad ibn Yusuf ibn Ibrahim from the Tenth to the Seventeenth Centuries in the World of Islam and the Latin West. - ISHAS 1. I, 1977, 417-418; II, 1978, 91-107.
4. The Hispanic Origin of our Present Numeral Forms. - Viator. 8, 1977, 435-462.
5. The Western Misinterpretation of the Role of Abu Ma`shar in the Scientific Movement in Baghdad during the Third Century Hegira. - ISHAS 2, 1979, Suppl. 102.
6. Abu Ma`shar. - ENWC. 1997, 5-6.
7. Astrology in Islam. - ENWC. 1997, 81-83.
8. Masha'allah. - ENWC. 1997, 602-603.

Lemmlein, Georgiy Glebovich (1901-1962)

1. Mineralogicheskiye svedeniya, soobshchayemye v traktate Biruni. - al-Biruni [22], 292-418.

Leonov, Nikolay Ivanovich (1894-1971)

1. Ulugbek - velikiy astronom XV v. M., 1949.
2. Nauchnyy podvig samarkandskikh astronomov XV v. M., 1960.
3. Beruni - geotektonik. - "al-Biruni" [7], 1973, 72-80.
4. Idei o gorizontal'nom peremeshchenn "chastey sushi" u al-Biruni. - VIYT. 45, 1973, 28-29.
5. Biruni - mobilist (idei o gorizontal'nom peremeshchenii "chastey sushi" u Biruni), - ACIHS XIII (M., 1971). 3-4, 1974, 189-192.

Lesley, Mark

1. Biruni on Rising Times and Daylight Lenghts. - Centaurus. 5, 1957, No 2, 121-141.

Lettinck, Paul

1. Problems of Aristotle's "Physics" I, 1 and Their Discussion by Arab Commentators. - JHAS. 10, 1994, No 1-2, 91-109.

Levey, Martin (1913-1970)

1. Introduction to the Algebra of Abu Kamil. - Abu Kamil [1], 1966, 1-26.
2. Abu Kamil. - DSB. 1, 1970, 30-32.
3. Transmission of Indeterminate Equations as Seen in an Istanbul Manuscript of Abu Kamil. - Japanese Studies in the History of Science. 9, 1970, 17-25.

Levey, M. and Petruck, Marvin

1. Introduction to Principles of Hindu Reckoning of Kushyar ibn Labban. - Ibn Labban [1], 1965, 1-41.

Levi della Vida, Giorgio (1886-1967)

1. Appunti e quesiti di storia litteraria araba "Due nuove opera della matematica al-Karajî (al-Karkhî). - Rivista degli Studî Orientali. 14. 1934. No 3, 241-264.
2. Elenco dei manoscritti arabi islamici della biblioteca Vaticana, manuscritti Barberiani. Rossiani. Studî e Testi. 67. Citta del Vaticano. 1935.
3. Secondo elenco dei manoscritti islamici della biblioteca Vaticana. Studî e Testi. 242. Citta del Vaticano. 1965.

Levinova, Inna Sergeyevna (b. 1940)

1. Teoriya vesov v'traktatakh Omara Khayyama i yego uchenika Abu Hatima al-Muzaffara ibn Ismaila al-Asfizari. - TNKA. XV(m), 1972, 90-93.
2. O statike al-Khazini. - TNKA . XVI(m), 1973, 50-56.
3. Statika na srednevekovom Vostoke. ADK (fm). M., 1974.
4. Razvitiye ponyatiya sily i vesa v nauke srednevekovogo Vostoka. - TNKA. XVII (m), 1975, 100-105.

Levinova, I. S. and Rozhanskaya, M. M.

1. Problema ravnovesiya v statike srednevekovogo Vostoka. - TNKA. XVII(m), 1975, 161-167.
2. Razvitiye ponyatiya tsentra tyazhesti v statike srednevekovogo Vostoka. - TNKA. XVII (m), 1975, 168-174.

Lévi-Provençal, Evariste (1894-1956)

1. Les manuscrits Arabes de Rabat. - Bibliothèque de École supérieure de langue Arabe et les dialectes Berbères. 7, Rabat, 1922.
2. al-Maqqari. - EI. 3, 1934, 189-190).
3. Makkarî. - IA. 7, 1962, 205-207.

Levy, Louis Germain

1-Maimonide. P., 1911, 1932, 1952.

Lévy, Tony

1. Le chapitre I, 73 du Guide de égarés et la traduction mathématique hébraïque en Moyen Age. Un commentaire inédit de Salomon b. Israel. - Rev. Étud. Juives. 148, 1989, 303-371.
2. Gersonide, le Pseudo-Tusi, et le postulat des parallèles. Les mathématiques en hébreu et leur sources arabes. - ASP. 1, 1991, No 1, 39-82.

Lewicki [Levicki], Tadeusz

1. La voie Kiev-Vladimir (Wlodzimierz Wolynski) d'après le géographe arabe du XII^ème siècle, al-Idrisi. - Rocznik Orientalistyczny. Lwów, 13, 1937, 91-105; "Studies on al-Idrisi" [4], 1992, 273-287.
2. al-Qazwini Zakariya. - EI^2. 4, 1976, 865-867.

Lewin, B.

1. Al-Dinawari. - EI^2. 2, 1970, 300.

Ley, Hermann

1. Avicenna. B., 1953.

Libri, Guillaume (1803-1869)

1. Histoire des sciences mathématiques en Italie. I. P., 1837.

Lindberg, David Charles (b. 1935)

1. Alhazen's Theory of Vision and Its Reception in the West. - Isis. 58, 1967, 321-341.
2. The Theory of Pinhole Images from Antiquity to the Thirteenth Century. - AHES. 5, 1968, 154-176; [11], No 12.
3. The Cause of Refraction in Medieval Optics. - The British J. for the History of Science. 4, 1968, No 13.
4. Al-Kindi's Critique of Euclid's Theory of Vision. - Isis. 62, 1971, 469-489.
5. Introduction. - Ibn al-Haytham [1], 1972, 1-32.
6. Al-Kindi's Theory of Vision. - ACHS XIII (M., 1971). 3-4, 1974, 154-160.
7. A Catalogue of Medieval and Renaissance Optical Manuscripts. Toronto, 1975.
8. Theories of Vision from al-Kindi to Kepler. Chicago, 1976.
9. The Science of Optics. - "Sciences in the Middle Ages", 1978. 338-368; [11], No 1.

10. The Intromission-Extramission Controversy in Islamic Visual Theory: al-Kindi versus Avicenna. - "Studies in Perception" [1], 1978, 137-159; [11], No 4.
11. Studies in the History of Medieval Optics. L., 1983.
12. The Western Reception of Arabic Optics. - EHAS II, 1996, 716-730.

Linder, Isaak Maksovich

1. Biruni o chaturange. - Shahmaty v SSSR. 1975, No 5, 20-21.

Lippert, Julius (1839-1909)

1. Theon in der orientalischen Literatur. - Studien auf dem Gebiete der griechisch-arabischen Uebersetzungsliteratur. Braunschweig, 1894, 39-50.

"List"

1. List of Publications. Institut fur Geschichte der arabisch-islamischen Wissenschaften an der Johann Wolfgang Goethe-Universitat. F.M., 1983.
2. List of Publications. Institut fur Geschichte der arabisch-islamischen Wissenschaften an der Johann Wolfgang Goethe-Universitat. F.M., 1984.
3. List of Publications. Institut fur Geschichte der arabisch-islamischen Wissenschaften an der Johann Wolfgagng Goethe-Universitat. F.M., 1989.

"Liste"

1. Une liste des manuscrits choisis parmi les bibliothèques de Kayseri, Akşehir, Bor, Gülşehri, Nevşehir, Niğde, Ürgüp. İstanbul, 1950; "Handschriften" [1], 3, 1986, 549-575.
2. Une liste des manuscrits choisis parmi les bibliothèques de Bursa. İstanbul, 1951; "Handschriften" [1], 3, 1986, 467-548.
3. Une liste des manuscrits choisis parmi les bibliothèques de Konya. İstanbul, 1951; "Handschriften" [1], 3, 1986, 577-615.
4. Une liste des manuscrits choisis parmi les bibliothèques de Manisa, Akhisar. İstanbul, 1951; "Handschriften" [1], 3, 1986, 617-649.

Livingston, John W.

1. The Mukhula, an Islamic Conical Sundial. - Centaurus. 16, 1971, 299-308.

Llamas, P. José

1. Maimonides (siglo XII). Madrid, 1935.

Lobzova, Raisa Fyodorovna (1926-1977)

1. Eksperimental'noye issledovaniye prelomleniya sveta Ibn al-Haysamom. - TNKA. XVI(f), 1973, 30-34.

Loebenstein, Helene

1. Katalog der arabischen Handschriften der Osterreichischen Nationalbibliothek, Neuerwerbungen, 1868-1960. Wien, 1970.

Lofgren, Oscar

1. al-Hamdani. - EI^2. 3, 1971, 124-125.
1. Ambrosian Fragments of an Illuminated Manuscript Containing the Zoology of al-Jahiz. Uppsala, 1946.

Lohne, Johannes August (1908-1993)

1. Zur Geschichte des Brechungsgesetzes. - SA. 47, 1963, 152-172.
2. Regenbogen und Brechzahl. - SA. 49, 1965, 401-405.
3. Alhazens Spiegelproblem. - Nordisk Mat. Tidskrift. 18, 1970, 5-35, 72.

Lokotsch, Karl.

1. Avicenne als Mathematiker, besonders die planimetrischen Bücher seiner Euklidübersetzung nach dem Kitab al-Schifa'. Erfurt, 1912.

Lomba Fuentes, Joaquin

1. Tratado sobre el Entendamiento Agente de Avempace. - Anales del Seminario de la Historia de la Filosofia. Memoria-Homenaje a Adolfo Arias Munoz, el nombre special, 1996, 265-274.

López, A. C.

1. Vida y obra del famoso poligrafo cordobes del s. X `Arib ibn Sa`id - "Ciencias de la Naturaleza en al-Andalus, Textos y Estudios", I, ed. por E. Garcia Sanches, Granada, 1990, 317-347.

Lorch, Richard Paul (b. 1942)

1. Jabir ibn Aflah. - DSB. 7, 1973, 37-39.
2. The Astronomy of Jabir ibn Aflah. - Centaurus. 19, 1975, 85-107.
3. The Astronomical Instruments of Jabir ibn Aflah. and the Torquetum. - Centaurus. 20, 1976, 11-34.
4. The Origins of Jabir ibn Aflah's Mathematics. - ISHAS. 2, 1979, 65.
5. The Qibla-table Attributed to al-Khazini. - JHAS. 4, 1980, No 2, 259-264.
6. Al-Khazini's "Sphere that Rotates by itself". - JHAS. 4, 1980, No 2, 287-329.
7. The "spherae solida" and Related Instruments. - Centaurus. 24, 1980, 153-161.
8. A Note on the Horary Quadrant. - JHAS. 5, 1981, No 1-2, 115-120.

8a. Al-Khazini's Balance-clock and the Chinese Steelyard Clepsydra. - AIHS. 31, 1081, No 106, 183-189.

9. Nasr b. `Abdallah's Instrument for Finding the Qibla. - JHAS. 6, 1982, 123-131.
10. Abu Ja`far al-Khazin on Isoperimetry and the Archimedean Tradition. - ZGAIW. 3, 1986, 230-264.
11. Al-Saghani's Treatise on Projecting the Sphere. - "From Deferent to Equant" [1], 1987, 237-252.
12. The Arabic Transmission of Archimedes' "Sphere and Cylinder" and Eutocius' Commentary. - ZGAIW. 5, 1989, 94-114.
13. al-Khazini, Abul-Fath. `Abdarrahman. - LM. 4, 1989, 1983.
14. Ibn al-Haiṯam. - LM. 5, 1990, 315-316.
15. Ibn Abi Riǧal. - LM. 5, 1990, 319-320.
16. Abu Kamil on the Pentagon and Decagon. - "Vestigia" [1], 1993, 215-252.

16a. Arabic Mathhematical Sciences. Aldershot, 1995.

16b. Ptolemy and Maslama on the Transformation of Circles into Circles in Stereographic Projection. - AHES. 49, 1995, No 3, 271-274.

17. Maslama al-Majriṭi and Thabit's al-Shakl al-Qaṭṭa`. - "From Baghdad to Barcelona" [1]. I, 1996, 49-57.
18. Jabir ibn Aflah.. - ENWC. 1997, 459.
19. Quadrant. - ENWC. 1997, 837.
20. Ibn al-Salah's treatise on projection a preliminary survet.- "Sic itur ad astra", Wiesbaden, 2000, 401-408.

Lorch, R., Brey, G., Kirschner, S., and Schoner, C.

1. Ibn as-Saffars Traktat uber das Astrolab in der Ubersetzung von Plato von Tivoli. - "Cosmographica et Geographica". Festschrift fur Heeribert M. Nobis zum 70. Geburtstag. "Algorismus". Studien zur Geschhichteder Mathematik und der Naturwissenschaften. 13, 125-180.

Lorch, R. and Kunitzsch, P.

1. Habash al-Hasib's Book on the Sphere and its Use. - ZGAIW. 2, 1985, 68-98.

Loth, Otto (1844-1892)

1. Catalogue of the Arabic Manuscripts in the Library of the India Office. L., 1877.
2. Al-Kindî als Astrolog. - Morgenlandische Forschungen. Festschrift Herrn Professor Dr. H.I.Fleischer gewidmet. Lpz., 1875, 261-302.

Luckey, Paul (1888-1949)

1. Ṯabit b. Qurra's Buch über die ebenen Sonnenuhren. - QS(B). 4, 1938, 95-148.
2. Ṯabit b. Qurra über den geometrischen Richtigkeitsnachweis der Auflösung der quadratischen Gleichungen. - Berichte der Sachs. Akad. der Wiss., math.-phys. Kl. 13, 1941, 93-114.
3. Zur Entstehung der Kugeldreiecksrechnung. - Deutsche Mathematik. 5, 1941, 405-446.
4. Die Schrift des Ibrahim b. Sinan b. Ṯabit über die Schatteninstrumente. Dissertation, Tubingen, 1944.
5. Beiträge zur Erforschung der islamischen Mathematik. - Orientalia (N.S.). 14, 1945, 142-184, 17, 1948, 490-510, 22, 1953, 166-189.
6. Die Ausziehung des n-ten Wurzel und der binomische Lehrsatz in der islamischen Mathematik. - Math. Annalen. 120, 1948, 244-245.
7. Zur islamischen Rechenkunst und Algebra des Mittelalters. - Forschungen und Fort-schritte. 24, 1948, No 17/18.
8. Die Rechenkunst bei Gamsid b. Mas`ud al-Kasi mit Rückblicken auf die ältere Geschichte des Rechnens. - Abhandl. für die Kunde des Morgenlandes. 31. Wiesbaden, 1951.

Lugal, N. and Sayili, A.

1. Fârâbî'nin tabiat ilminin kökleri hakkında yüksek makaleler kitabı. - TTKB. 15, 1951, No 57, 81-122.
2. Ebu Nasr il-Fârâbî'nin Halâ üzerine makalesi. Fârâbî's Article on Vacuum. - TTKY. (15), 1, 1951.

Lyons, M. C.

1. "On the Nature of Man" in `Ali ibn Ridwan's Epitome. - Al-Andalus. 30. 1965, No 1, 181-188.

Lyuter [Luther], Irina Olegovna

1. Traktat Ibrahima Ibn Sinana o tenevykh instrumentakh. - TNKA. XVII-XXXI, 1990.
2. Proyektivnye preobrazovaniya v traktate Ibrahima ibn Sinana o postroyenii konicheskikh secheniy. - TNKA. XXVII-XXXI, 1990.
3. Geometricheskiye preobrazovaniya na srednevekovom Blizhnem i Srednem Vostoke. - ADK (fm). M., 1993; IMI. 36, 1995, 40-60.
4. K istorii zadachi Apolloniya o postroyenii okruzhnosti, kasayushcheysya tryukh dannykh okruzhnostey. - IMI. 1(36), 1996, No 2, 82-94.
5. The Solution of "Apollonius' Problem" in the Treatise of Ibrahim ibn Sinan. - ACIHS XX, 1997, 34.

MacCarthy, R. J.

1. al-Tasanif al-mansuba ila faylasuf al-`arab Ya`qub al-Kindi. Baghdad, 1962.

Macdonald, Duncan Black (1863-1943)

1. The Life of al-Ghazali. - JAOS. 20, 1899, 71-132.
2. The Arabic and Turkish Manuscripts in the Newberry Library. Chicago, 1912.
3. al-Ghazali. - EI. 2, 1927, 146-148.
4. Continuous Creation and Atomic Time in Moslem Scholastic Theology. - Isis. 9, 1927.

MacGrew, Timothy J.

1. Physics in the Islamic World. - ENWC, 1997, 819-822.

Mach, Rudolf

1. Catalogue of Arabic Manuscripts (Yahuda Section) in the Garrett Collection, Princeton University, Princeton, 1977.

Macht, David I.

1. Moses Maimonides, physician and scientist, the William Osber of Medieval Arabic and Hebrew medicine. - Bull. of the Institute of the history of Medicine. 3, 1925, 585-598.

Maddison, Francis (b. 1927) and Brieux, Alain

1. Bastulus or Nastulus. A Note on the Name of an Early Islamic Astrolabist. - AIHS. 1974, No 94, 157-169.

MacPeak, William

1. Meteorology in the Islamic World. - ENWC. 1997, 739-741.

Madelung, Wilfred

1. Abu Rasid Nisaburi. EIr. 1, 1985, 367-368.

Madkour, Ibrahim

1. L'Organon d'Aristote dans le monde arabe. Ses traductions, son étude et ses applications. Analyse puisée principalement à un commentaire inédit d'Ibn Sina. Préface de S. van den Bergh. P., 1934; 1967.
2. La place d'al-Fârâbî dans l'école philosophique musulmane, P., 1934.

Maghsood, Javad

1. Catalogue of Manuscripts in the Isfahan Public Library. I.Tehran, 1970.

Mahdawi, Yahya

1. Fihrist-i nuskhaha-yi musannafat-i Ibn Sina. Bibliographie d'Ibn Sina. Tehran, 1333 s.h. - Tehran, 1954.

Mahdi, Muhsin

1. Ibn Khaldun's Philosophy of History. L., 1957.
2. Alfarabi's Philosophy of Aristotle. Beirut, 1961.
3. Alfarabi's Philosophy of Plato and Aristotle. N.Y.. 1962.

4. Ibn Khaldun. - A History of Muslim Philosophy. 2. Wiesbaden, 1966, 888-904, 961-984.
5. Alfarabi's Book of Religion and Related Texts. Ed. with introduction and notes. Beirut, 1968.
6. Science, Philosophy and Religion in Alfarabi's Enumeration of the Sciences. - "The Cultural Context of Medieval Learning", ed. by J.E.Murdoch and E.D.Sylla. Dordrecht - Boston, 1975, 113-147.
7. Approaches to the History of Arabic Science. - EHAS. III, 1996, 1026-1044.

Mahdi, Muhsin and Wright, O.

1. Al-Farabi. - DSB. 4, 1971, 523-526.

Mahfuz, Husayn `Ali

1. Nafais al-makhtutat al-`arabiyya fi Iran. - MMMA. 3, 1957, 3-78.

Mahmudov, A. and Mahmudov, Q.

1. Abu Ali ibn Sinoning fonetik asari. - "Ibn Sina" [9], 1980, 184-190.

al-Mahri (No 956)

1. al-`Umda. Nashara al-Khuri. Dimashq, 1390 h. [1970].
2. al-Minhaj. Nashara al-Khuri. Dimashq, 1390 h. [1970].

Mai, Angelo

1. Catalogus codicorum arabicorum, persicorum et turcicorum Bibliothecae Vaticanae. 4. Romae, 1831.

Maillard, P.

1. Bibliothèque de la Grande Mosquée de Tanger. - Revue du Monde Musulman. 35, 1917-1918, 107-190.

Maimonides [Ibn Maymun] (No 534)

1. Le Guide des Egarés, traité de théologie et de philosophie par Moise ben Maimoun dit Maimonide publié pour la première fois dans l'original Arabe et accompagné d'une traduction française et de notes critiques littéraires et explicatives par S.Munk. 1-3. P., 1856-1866.
2. Traité des poisons. Trad. par I.M.Rabinowicz. P., 1865, 1935.
3. More-Newuchim - Fuhrer der Verirrten - im Grundriß. Ubers. und herausg. von A. Altmann. B., 1935.
4. Maimonides' Treatise on Logic (Maqalah fi sina`at al-mantiq). The Original Arabic and Three Hebrew Translations, critically ed. and transl. into English by I.Efros. N.Y., 1938.
5. The Guide for the Perplexed. Transl. by M.Friedlander, 2nd ed., N.Y., 1956.
6. Opera omnia, 1-20. Ed. J.Kafih, M.D.Rabinowitz, S.T.Rubinstein. Jerusalem, 1957-1962.
7. Le Guide des égarés. Rééd. du texte français de [1]. 1-3. P., 1970-1981.
8. The Guide of the Perplexed. Transl. by S.Pines. Chicago, 1963.
9. Dalalat al-ha'irin. Ed. Huseyin Afay. Ankara, 1974.
10. Moise Maimonide. Epîtres: épître sur la persécution, épître au Yémen, épître sur la résurrection. introduction au chapitre Heleq. Trad. de l'hébreu par J. de Hulster. P., 1983.

"Maimonides" (memorial collections)

1. 850ème anniversaire de la naissance de Maimonide: 1135-1204. P., 1985.
2. Maimonides and Philosophy. Papers presented at the Sixth Jerusalem Philosophical Encounter, May 1985. Ed. by S.Pines and Y.Yovel. Dordrecht-Boston-Lancaster, 1986.

Mainkar, V. B.

1. Metrology in al-Biruni's India. - "al-Biruni" [13], 1975, 224-229.

Majda, Tadeusz

1. Katalog rekopisów orientalnych ze zbiorów polskich. 5:2. Katalog rekopisów tureckich i perskich. Warszawa, 1967.

Maitra, K. M.

1. Catalogue of Arabic Manuscripts in Tabular Form in the Collection of the Asiatic Society of Bengal. Ed. by M.S.Khan. 1. Calcutta, 1980.

al-Majlisi (No 1213)

1. `Ayn al-hay'a. Tehran, 1240 h. [1825].

2. Die Mythen des Lebens Jesu. Auszüge aus "Haiat ul-Kulub, oder Geschichte Muhameds, beschrieben nach der Schiitischen Tradition von Muhamed Bachir". Herausg. von M.Chr.G. Barth. Stuttgart, 1837.
3. Hayat al-qulub. Tehran, 1240-1260 h. [1824-1844], 1261-1284 h. [1845-1867], Tabriz, 1240-1241 h. [1824-1826], Lukhnow, 1295-1296 h. [1878-1879], 1300-1301 h. [1883-1884].
4. The Life and Religion of Mohammed as Contained in the Sheeâh Traditions of the Hyât-ul-Kuloob, transl. by J. L.Merrick. Boston, 1850.
5. Bihar al-anwar. Tehran, 1315 h. [1897].

al-Majriti (No 354)

1. Kitab ghaya al-hakim wa ahaqq al-natijatayn bi'l-taqdim al-mansub ila Abi'l-Qasim Maslama ibn Ahmad al-Majriti. Nashara H.Rittir. Layptsik - Barlin, 1933.
2. Picatrix. Das Ziel des Weisen von Pseudo-Mağriti. Ubers. H.Ritter und M.Plessner. L., 1962.

"Makhtutat"

1. Makhtutat al-khizana al-Ma'lufiyya fi'l-Jami'a al-Amirikaniyya. Beirut, 1926.

"Maktaba"

1. Maktaba Ayatallah al-Hakim al-`amma. Najaf, 1382 h. [1962].

Mallet, Dominique

1. Le kitab al-tahlil d'al-Farabi. - JSP, 4, 1994, No 2, 317-335.

Mal'tsev, Yuriy Stepanovich

1. "Dikovinki sotvorennogo i redkosti sushchestvuyushchego" - tsennyy istochnik po izucheniyu persoyazychnoy geograficheskoy literarury XII v. - IAN. Taj. SSR., otd. obshch. nauk. 1969, No 1, 95-96.
2. Osobennosti struktury persoyazychnoy kosmografii XII veka "Aja'ib al-Makhlukat" Hamadani. - IAN. Taj. SSR., otd. obshch. nauk. 1969. No 2, 38-45.
3. Anonimnaya persoyazychnaya kosmografiya XIII veka "Aja'ib al-Makhlukat wa ga-ra'ib al-mawjudat" kak istoriko-geograficheskiy istochnik. - ADK (i). Dushanbe, 1972.
4. K opytu deshifrovki sfericheskoy karty mira Abu Zeyda ibn Sahlya al-Balkhi. - IAN. Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk, 1977, No 4, 95-97.
5. Perechen' trudov Muhammada al-Khorezmi. - "al-Khwarizmi" [2], 1983, 207-208.
6. Geograficheskiye predstavleniya uchonykh Bayt al-Hikma v epokhu al-Khorezmi. - Jafri i Mal'tsev [1], 1985, 19-34.
7. Muhammed al-Khorezmi i yego nauchnoye naslediye. - Jafri i Mal'tsev [1], 1985, 35-56.

al-Ma`luf, `Isa Iskandar

1. Min nafais al-khizana al-Taymuriyya fi'l-Qahira. - Majalla Majma` al-lugha al-`arabiyya bi-Dimashq. 3, 1923, 337-344, 350-366.
2. Min nafais al-khizana al-Barudiyya fi Beirut. - Majalla Majma` al-lugha al-`arabiyya bi-Dimashq. 5, 1925, 32-34, 133-136, 187-190, 223-225.

Mamatsashvili, Maia

1. K.Kekelidzis sahelobis Helnatserta institutis sparsul helnatserta katalogi (AC kolek-tsia). Katalog persidskikh rukopisey Instituta rukopisey im. K.S.Kekelidze (kollektsiya AC). Tbilisi, 1977.

Mamedbeyli, Habibulla Jafarqulu oghlu (1914-1982)

1. Iz istorii Maraginskoy observatorii. - Trudy soveshchaniyapo istorii yestestvoznaniya. M. - Lg. 1948, 150-160.
2. Vydayushchiysya azerbayjanskiy uchonyy. - IAN. Azerb. SSR., 1951, No 9, 9-17.
3. H.J.Mammadbeyli. Astronomiya va riyaziyyat elmlarinin inkishafynda Mahammad Nasiraddininin elmi asarlarinin ahamiyyati - "al-Tusi" [1], 1951, 5-7, 35-39.
4. Zvyozdnyy globus Maraginskoy observatorii. - Uch. zap. Azerb. gps. universiteta. 1955, No 9, 113-116.
5. G.D.Mamedbeili. L'osservatorio di Maraga e osservatorio di Pechino del XIII secolo. - ACIHS VIII (Firenze, 1956), 1958, 422-424.
6. Maraginskaya astronomicheskaya observatoriya i Pekinskaya observatoriya XIII v. - IAI. 3, 1957, 517-530.
7. Muhammed Nasireddin Tusi o teorii parallel'nykh liniy i teorii otnosheniy. Baku, 1959.
8. Osnovatel' Maraginskoy observatorii Muhammed Nasireddin Tusi. Baku, 1961.
9. Astronomicheskiy katalog Maraginskoy observatorii. - Voprosy istorii fiz.-mat. nauk. M. 1963, 511-512.
10. Muhammad Nasiraddin Tusi. Baky, 1957, 1968.

Mamedbeyli, H. and Hashymzade, M.

1. Shaklul-gita (Kasishmalar shakli) asarinin riyaziyyat tarihinda ahamiyyati. - IAN. Azerb. SSR, 1951, No 8, 57-77.

Mamedbeyli, H. and Marupov, N.

Ba'ze korhoi Aburayhon Beruni oid ba fizika wa astronomiya. - Maktabi soveti. 1968, No 11, 36-41.

Mamedov, J.

1. Bahmanyar - vydayushchiysya uchenik Ibn Siny. - "Ibn Sina" [16], 1981, 120-127.

Mamedov-Khayyami, Qulu Mirza Mamed oghly

1. 9-15 asrlarde Yakhyn wa Orta Sharq rijjazijjaty haqqynda. - IAN. Azerb. SSR, ser. fiz.-mat. i tekhn. nauk. 1960, No 6, 31-36.
2. O kommentariyakh Nasireddina Tusi v I-III knigakh "Tahrir Éqlidis" k knige "Nachala" Yevklida. - Trudy Instituta matematiki i mekhaniki AN Azerb. SSR, 1963, No 2, 147-158.

Mamedova, Jahanara Abdulla zoda (b. 1939)

1. Traktat Nasireddina al-Tusi "Dvadtsat' glav o poznanii astrolyabii" i kommentarii al-Birjandi k nemu. - TNKA. XIII (m), 1970, 34-43.

Mancha, J. L.

1. Ibn al-Haytham's Homocentric Epicycles in Latin Astronomical Texts of the XIVth and XVth Centuries. - Centaurus. 3, 1990, No 1, 70-89.

Mansion, P.

1. Sur le commentaire d'Anaritius aux Eléments d'Euclide. - Ann. de la Société scientifique. Bruxelles. 24, 1900, 47-49.

Mansur, `Abd al-Hafiz

1. Dar al-kutub al-wataniyya. al-Fihris al-`am li'l-makhtutat. Tunis, 1975.

Mansur, F.

1. Ibn Sina. Lahore, 1952.

Maqbul Ahmad, Sayyid (1919-1998)

1. Al-Mas'udi's Contribution to Medieval Arab Geography. - Islamic Culture. 27, 1953, 61-73, 28, 1954, 275-286.
2. Travels of al-Mas'udi. - Islamic Culture. 28, 1954, 509-524.
3. India and the Neighbouring Territories in Kitab nuzhat al-mushtaq fi ikhtiraq al-afaq of al-Sharif al-Idrisi. Leiden, 1960.
4. Djughrafiya. - EI^2. 2, 1965, 575-587.
5. Ibn Madjid. - EI^2. 3, 1971, 856-859.
5a. Ibn Rusta. - EI^2. 3, 1971, 920-921.
6. Kharit.a. - EI^2. 4, 1971, 1077-1083.
6a. Al-Idrisi. DSB. 7, 1973, 4-6.
7. Ibn Majid. - DSB. 9, 1974, 35-37.
7a. Al-Mas`udi. - DSB. 9, 1974, 171-172.
8. Al-Qazwini. - DSB. 11, 1975, 230-233.
9. Yaqut al-Hamawi. - DSB. 14, 1976, 546-547.
10. Ibn Khurdadhbih. - ENWC. 1997, 423.
11. Ibn Majid. - ENWC. 1997, 424.
12. Al-Idrisi. - ENWC. 1997, 442-443.

Maqbul Ahmad, S., Behari, Ram, and Subbarayappa, B. V.

1. Al-Biruni. An Introduction to his Life and Writtings on the India Sciences. - "al-Biruni" [13], 1975, 98-110.

al-Maqqari (No 1099)

1. Analectes sur l'histoire et le littérature des Arabes d'Espagne. Éd. R.Dozy, G.Dugat, L.Krehl et W.Wright. 1-2, Leyde, 1855, 1861.
2. Nafh al-tib min ghusn al-Andalus al-ratib. 1-4. al-Qahira, 1301 h. [1884]; 1-10. al-Qahira, 1368 h. [1949].

3. The History of the Mohammedan Dynasties in Spain Extracted from the Nafhu-t-tib by Ahmed el Maqqari. Transl. and illustr. by Pascual de Gayangos. L., 1890.
4. Nafh al-tib min ghusn al-Andalus al-ratib. 7. Nashara Ihsan `Abbas, Beirut, 1968.

al-Maqrizi (No 810)

1. Description topographique et historique de l'Egypte. Trad. par U.Bouriani et Paul Casanova. Le Caire, 1895-1920; rééd. par Fuat Sezgin. F.M., 1992.
2. Kitab al-Mawa`iz wa-l-i`tibar fi dikr al-hitat. wa-l-atar. Ed. par Gaston Wiet, 1-4. Le Caire, 1911-1927; rééd. par Fuat Sezgin. 1-5, F.M., 1995.

Maracchia, Silvio

1. Equazioni di secondo grado in Mohammed ben Musa al-Khuwarizmi. - Archimede. 29, 1977, No 4, 244-250.

Marçais, W.

1. Al-Khatib al-Baghdadi. - EI. 2, 1927, 997-998.
2. Hatîb Bagdâdî. IA. 5, 1958, 365-366.

Mare, Albinia de la

1. Catalogue of the Collection of Medieval Manuscripts Bequeathed to Bodleian Library, Oxford, by James P.R.Lyell. Ox. 1971.

al-Marghithi (No 1166)

1. Al-Susi al-Marghithi. al-Muqni` fi `ilm al-Muqri. Fas, 1313 h. [1985]; 1317 h. [1899]; Tunis, 1321 h. [1903].

Margoliuth, David Samuel (1858-1940)

1. Catalogue of the oriental manuscripts in the Library of Eton College. Ox., 1904.

Maróth, Miklós

1. Al-Huwarizmi Kozo-Azsiaról. - Kulolenyimat az antik tanulmanyok, 23, 1976, No 1, 178-211.
2. Das System der Wissenschaften bei Ibn Sina. - "Ibn Sina" [12], 1980, II, 27-34.
3. Istochniki geografii al-Khorezmi [4]. 1985, 111-115.

Marquet, Yves

1. Ikhwan al-Safa. - EI^2. 3, 1970, 1071-1076.
2. La philosophie des Ikhwan al-Safa. De Dieu à l'homme. P., 1971; Alger, 1973; Lille, 1973.
3. Ikhwan al-Safa. - DSB. 15, 1978, 249-251.
4. L'alchimie des philosophes. Jabir ibn Hayyan et les "Frères de la Pureté". P., 1988.
5. La contradiction et l'éveil de la conscience dans le système de Farabi. - Bull. Études Orient. 47, 1995, 99-108.

Marr, Yuriy Nikolayevich (1893-1935)

1. Ulugbegis zijs Vakhtangiseuli targmani sparsul-kartuli leksikonit. Le zij d'Oloug-Beg, traduction de Vakhtang, avec glossaire persan-géorgien. - Sparsul-kartuli tsdani I. Études persanes-géorgiennes I. Lg., 1926, 3-53.

al-Marrakushi (No 592)

1. Traité des instruments astronomiques des Arabes composé au treizième siècle par Aboul Hhassan Ali, de Maroc, intitulé Jami` al-mabadi wa'l-ghayat (Collection des commencements et des fins), Trad. par J.J.Sédillot et publiée par L.A.Sédillot. 1-2. P., 1834-1835; Reéd. par Fuat Sezgin avec son introduction en français et arabe. F.M., 1984.
2. Jami` al-mabadi wa'l-ghayat fi `ilm al-miqat. Comprehensive Collection of Principles and Objectives in the Science of Timekeeping. 1-2. Introduction in Arabic and English by Fuat Sezgin. F.M., 1984.

Marre, Aristide

1. Biographie d'Ibn al-Banna. - Atti dell' Accad. Pontificia de' Nuovi Lincei. 19, 1865, 1-25.
2. Mémoire de compte des anciens avec les doigts de la main. - BBSMF. 1, 1868, 309-318.

Marti, R. and Viladrich, M.

1. Las tablas de climas en los tratados de astrolabio del manuscrito 225 del Scriptorium de Ripoll. - Llull. 4, 1981, 117-122.

Martin, M. A.

1. Abu Jusuf Ya'qub al-Kindi. - GAC. 1976, 68-69.
2. Abu al-Walid Muhammad bin Rushd (Averroes). GAC. 1976, 70-71.
3. 'Abd ar-Rahman bin Muhammad bin Khaldun. - GAC. 1976, 72-73.

Martinovitch, N. N.

1. Arabic, Persian, and Turkish manuscripts in the Columbia University Library. - JAOS. 1929, 319-233.

Marupov [Ma`rufov], Nasirjon Katyp zoda

1. Ibn Sinâ va mekhanika. - Maktabi soveti . 1969, No 8, 38-40.
2. Raboty Biruni po opredeleniyu udel'nykh vesov. - Uch. zap. Dushanb. gos. ped. instituta. 72, 1970, 54-79.
3. Biruni o yedinitsakh izmereniya fizicheskikh velichin. - Uch. zap. Dushanb. gos. ped. instituta. 81, 1971, 91-102.
4. Nekotoryye voprosy optiki v trydakh Ibn Sina. - Uch. zap. Dushanb. gos. ped. instituta. 93, 1974, No 2, 3-10.
5. Optika v trudakh Ibn-Sino. - TNKA. XVII (f), 1974, 66-71.
6. Laboratoriya Beruni. - Voprosy istorii fiz.-mat. nauk. Tambov, 1974, 59-60.
7. Otdel'nyye fizicheskiye voprosy v trudakh Ibn Sina. - IAN. Taj. SSR, ser. fiz.-mat. i geol.-mineral. nauk 1978, No 3, 90-93.
8. Voprosy fiziki v trydakh Ibn Sina i Beruni. - ADK (fm). M., 1978.

Marupov, N. K. and Rosenfeld, B. A.

1. O rabotakh iranskikh uchonykh IX-X vv. al-Iranshahri i ar-Razi po fizike. - VIYT. 1980, No 2, 106-111.

Marx, Alexander

1. Texts by and about Maimonides. - Jewish Quaterly Review. 25, 1935, 371-428.

Marzloff, Jean Claude

1. Les contacts entre les astronomies et mathématiques arabes et chinoises vus principalement à partir de sources chinoises. - "al-Multaki" [2], 1995, 164-182, arab. 166-168.

Mashallah (No 18)

1. Massahalae de scientia motus orbis. Norimbergae, 1504.
2. Massahallae de elementis et orbibus coelisitibus. Norimbergae, 1549.

Mashanov, Aqjan Jaqsybek uly

1. Abunasir al-Farabi engbegi-alghashqy ret qazaq tilinde. - Bilim jane engbek. 1962, No 1, 4.
2. Al-Farabi Tarihi-derekti kitab. Alma-ata, 1970.
3. Kosmologiya al'-Farabi. Alma-Ata, 1971.
4. Astronomicheskoye naslediye al'-Farabi. - "al-Farabi" [4], 1975, 43-44.

Massé, Henri

1. Nizami `Arudi Samarqandi. - EI. 3, 1934, 1013-1014; EI². 8, 1994, 76.
2. La "Naurouz-name" de Khayyâm (Le livre du nouvel an). - Ann. de l'Institut des Études Orientales. 3, 1937, 238-265.
3. Nizâmî. - IA. 9, 1962, 327-328.

Masharipova G. K.

1. Kommentariy Kazi-zade Rumi na "Kompendiy astronomii" Chagmini. - ONU. 1994. No 7. 65-66.

Massignon, Louis

1. al-Tirmidhi. - EI. 4, 1934, 863.
2. Al-Berunî et la valeur internationale de la science arabe. - "al-Biruni" [4], 1951, 217-219.
3. La Philosophie Orientale d'Ibn Sînâ et son alphabet philosophique. - "Ibn Sina" [4], 4, 1954, 1-18.

Masson, Mikhail Yevgen'yevich (1897-1986)

1. Observatoriya Ulugbeka. Tash., 1941.

al-Mas`udi (No 186)

1. Maçoudi. Les prairies d'or, texte et trad. par Casimir Barbier de Meynard et Pavet de Courteille. 1-9. P., 1861-1917; 1-3. Ed. par Ch.Pellat. Beyrouth, 1962-1977.

2. Muruj al-dhahab wa ma`adin al-jawahir. al-Qahira. 1283 h. [1866], 1303 h. [1886], 1384 h. [1964].
3. Muruj al-dhahab wa ma`adin al-jawahir. 1-4, Beirut, 1964; 1-5, Beirut, 1966-1974.
4. Kitab al-tanbih wa'l-ishraf li Abu'l-Hasan `Ali ibn al-Husayn ibn `Ali al-Mas`udi. Kitab at-tanbîh wa'l-ischrâf, auctore al-Masudî. Accedunt indices et glossarium ad tomos VII et VIII, ed. M.J.de Goeje. Lugduni Batavorum, 1894; re-ed. by Fuat Sezgin, F.M., 1992.
5. Maçoudi. Le livre de avertissement et de la révision. Trad. par B.Carra de Vaux. P., 1897; rééd. par Fuat Sezgin, F.M., 1986.

"al-Mas`udi" (memorial volume)

1. al-Mas`udi. Millenary Commemoration Volume. Ed. by S.Maqbul Ahmad. Aligarh, 1960.

al-Mas`udi (No 666)

1. Kitab-i Jihan-i danish. Tehran, 1315 s. h. [1936].

"Matematika Vostoka"

1. Matematika i astronomiya v trudakh uchonykh srednevekovogo Vostoka. Pod red. S.H.Sirajdinova. Tash., 1977.
2. Matematika na srednevekovom Vostoke. Sbornik pod red. S.H.Sirajdinova. Tash., 1978.

"Materialy"

1. Materialy po istorii progressivnoy obshchestvenno-filosofskoy mysli v Uzbekistane. Pod red. I.M.Muminova. Tash., 1957.
2. Materialy po istorii progressivnoy obshchestvenno-folosofskoy mysli v Uzbekistane. 2-e izd., pod red. I.M.Muminova i M.M.Khayrullayeva. Tash., 1976.
3. Materialy po istorii i po istorii nauki i kul'tury narodov Sredney Azii. Tash., 1991.

."Mathemata"

1. Mathemata. Festschrift fur Helmuth Gericke. - Boethius, 12, Stuttgart, 1985.

"Mathematical Geography"

1-17. Mathematical Geography and Cartograhy. 1-17. Collection of papers ed. by Fuat Sezgin. F. M., 1992.

"Mathematics and its Application"

1. Mathematics and its Application to Science and Natural Philosophy in the Middle ages. Essays in honor of Marshall Clagett. Ed. by Edward Grant and John E.Murdoch. Cambridge - N.Y. 1987.

"Mathématiques et Philosopphie"

1. Mathématiques et Philosophie de l'Antiquité à l'Age Classique. Études en hommage à Jules Vuillemin. Ed. par R.Rashed, P., 1991.

Mathuri, Murtada

1. Pursishha-yi falsafi-yi Abu Rayhan az Bu `Ali. - "al-Biruni" [10]. 1973, 54-163.

Matveyev [Bar-Mattay], Konstantin Petrovich

1. Predisloviye (Kratkiy ekskurs v istoriyu assiriytsev. Grigoriy Yuhannan Bar-Ebraya - velikiy pisatel' i poet. O "Nravouchitel'nykh rasskazakh" Bar-Ebraya). - Abu'l-Faraj [22], 1985, 3-16.

Matviyevskaya, Galina Pavlovna (b. 1930)

1. K istorii matematiki Sredney Azii. Tash., 1961.
2. Biruniy wa tabii fanlar. Toshkent, 1963.
3. O matematicheskikh rukopisyah iz sobraniya Instituta vostokovedeniya AN Uz. SSR. - IAN. Uz. SSR., ser. fiz.-mat. nauk, 1965, No 3, 72-74.
4. K istorii ucheniya o chisle na srednevekovom Blizhnem i Srednem Vostoke. - IMI. 17, 1966, 273-280.
5. Ucheniye o chisle na srednevekovom Blizhnem i Srednem Vostoke. Tash., 1967.
6. Ucheniye o chisle v sredniye veka. ADD (fm). Tash., 1968.
7. Razvitiye ucheniya o chisle v Yevrope do XVII v. Tash., 1971.
8. Srednevekovyye arabskiye entsiklopedii kak istochniki po istorii matematiki Blizh-nego i Srednego Vostoka. - Tezisy dokladov IV Kazakhstan. mezhvuz. nauchnoy konf. po matem. i mekh., 1. Alma-Ata, 1971, 283-284.
9. Materialy k istorii ucheniya o chisle na srednevekovom Blizhnem i Srednem Vostoke. - "Iz istorii" [2], 1972. 76-169.

10. Matematicheskiye i astronomicheskiye rukopisi Instituta Vostokovedeniya AN Uz. SSR. - "Iz istorii" [2], 1972, 169-200.
11. Farabi i matematika. - ONU. 1973, No 6, 31-35.
12. Iz ranney istorii izucheniya matematicheskogo i astronomicheskogo naslediya Beruni. - "al-Biruni" [8], 1973, 173-185.
13. Matematicheskoye i astronomicheskoye naslediye Beruni i istoriya yego izucheniya. - IAN. Uz. SSR., ser. fiz.-mat. nauk. 1973, No 4, 4-10.
14. "Sredniye knigi" i ikh rol' v istorii srednevekovoy vostochnoy matematiki. - Tezisy dokladov V Kazakhstan. nauchnoy konf. po mat. i mekh., 2. Alma-Ata, 1974, 373-374.
15. Teoriya kvadratichnykh irratsional'nostey i teoriya otnosheniy v Yevrope do XVII v. - ACIHS XIII (M., 1971), 3-4, 1974, 77-80.
16. "Ischisleniе otrezkov" Ibn al-Baghdadi (ob arabskom predshestvennike Dekarta). VIYT. 1975, No 4, 29-31.
17. Antichnaya matematika i al'-Farabi. - "al-Farabi" [4], 1975, 45-46.
18. O predistorii neyevklidovoy geometrii (K 150-letiyu geometrii Lobachevskogo). - IAN Uz. SSR, ser. fiz.-mat. nauk. 1977, No 1, 21-23.
19. Desyataya kniga "Nachal" Yevklida v srednevekovykh arabskikh kommentariyakh. - "Matematika Vostoka" [1], 1977, 4-80.
20. Nekotoryye arabskiye kommentarii k desyatoy knige "Nachal" Yevklida. - "Matematika Vostoka" [2], 1978, 3-87.
21. Arabskiye srednevekovyye entsiklopedii kak istochniki po istorii matematiki i astronomii Blizhnego i Srednego Vostoka. - "Matematika Vostoka" [2], 1978, 88-96.
22. Razvitiye sfericheskoy trigonometrii na srednevekovom Vostoke. - Tezisy dokladov II vsesoyuz. nauchnoy konf. po istorii fiz.-mat. nauk. Tbilisi, 1978, 46.
23. Srednevekovyye ziji i razvitiye trigonometrii. - "Iz istorii" [3], 1979, 152-162.
24. Sferika i sfericheskaya astronomiya v drevnosti i na srednevekovom Vostoke. Razvitiye metodov astronomicheskikkh issledovaniy. - M.-Lg., 1979, 84-99.
25. O zarozhdenii elementov matematiki peremennykh velichin na srednevekovon Vostoke. - IAN Uz. SSR, ser. fiz.-mat. nauk. 1980, 1-56.
26. Sferika i sfericheskaya trigonometriya na srednevekovom Blizhnem i Srednem Vostoke. - IAN Uz. SSR, ser. fiz.-mat. nauk. 1981, No 4, 34-37.
27. On Some Common Problems of the History of Mathematics and Astronomy of the Medieval East. - "Ibn Sina" [14], 1981, 21-32.
28. Iz istorii izucheniya fiziko-matematicheskogo naslediya Ibn Siny. - "Ibn Sina" [14], 1981, 16-40; "Ibn Sina" [15], 1981, 106-115.
29. Istoriya sferiki v drevnosti i na srednevekovom Vostoke. - "Ibn Sina" [14], 1981, 95-117.
30. Some Extracts from the History of Spherics in the Medieval East. - ACIHS XVI, 1, 1981, 58.
31. Abd al-Rahman al-Sufi. - IAI. 16, 1982, 94-136.
32. Klassifikatsiya matematicheskikh nauk v srednevekovykh arabskikh entsiklopediyakh. - VIYT. 1982, No 1, 45-52.
32a. Stanovleniye ploskoy i sfericheskoy trigonometrii. M., 1982.
33. Vydayushchiysya matematik Muhammad ibn Musa al-Khorezmi i literatura o nyom. - "al-Khwarizmi" [12], 1983, 203-299.
34. Ob algebraicheskom traktate al-Khorezmi. - "Iz istorii" [4], 1983, 3-22.
35. Sochineniya al-Khorezmi v srednevekovoy Evrope. - ONU. 1983, No 7, 83-87.
36. Istoriya izucheniya nauchnogo tvorchestva al-Khorezmi. - "al-Khwarizmi" [4], 1985, 72-82.
37. The Theory of Quadratic Irrationals in Medieval Oriental Mathematics. - "From Deferent to Equant" [1], 1987, 253-277.
38. Ocherki istorii trigonometrii. Tash., 1990.
39. "Sushchnost' arifmetiki" Baha ad-Dina Amili i yeyo mesto v matematicheskoy literature stran Vostoka. - Matviyevskaya, Ibadov, and Sadritdinova [1] (68-85).
40. Mirovaya literatura o nauchnom nasledii Ulugbeka. - ONU. 1994, No 7, 67-72.

Matviyevskaya, G.P. and Ibadov, J.H.

1. Tochnyye nayki v entsiklopedii "Mudrost' istochnika" (Hikma al-ayn) al-Kazwini. - IAN. Uz. SSR., ser. fiz.-mat. nauk. 1989, No 2, 29-31.
2. Fiziko-matematicheskiye nauki v "Klyuchakh nauk" Abu Abdallaha al-Khorezmi. - IAN. Uz. SSR., ser. fiz.-mat. nauk, 1990, No 3, 34-39.
3. Matematicheskiye razdely entsiklopedii Baha ad-Dina Amili "Chasha dervisha' ("al-Kashkul"). - Matviyevskaya, Ibadov, and Sadritdinova [1] (92-96).

Matviyevskaya, G.P., Ibadov, J. H., and Sadritdinova Z.I.
1. Baha ad-Din Amili i yego "Sushchnost' arifmetiki". Tash., 1992.

Matviyevskaya, G.P., Ibadov, J. H., and Yusupova, G.
1. O tashkentskoy rukopisi traktata "Zhemchuzhina korony dlya ukrasheniya Dibaja" Kutb ad-Dina ash-Shirazi. - Uzbek. Matem. Zh. 3, 1994, 74-79.

Matviyevskaya, G. P. and Tllashev, H.
1. Novyye dannyye o nauchnom nasledii Nasireddina Tusi i yego shkoly. - Tsirkulyar Shemakhinskoy astrofizicheskoy observatorii. 30-31, 1973, 15-20.
2. Sochineniya Abu Nasra ibn Iraka o sferike. - "Iz istorii" [4], 1983, 82-171.
3. K voprosu o matematike v Sredney Azii v 13-14 vv. - IAN Uz. SSR, ser. fiz.-mat. nauk. 1974, No 2, 19-22.
4. Abu Nasr ibn Irak i yego obrabotka "Sferiki" Menelaya. - "Matematika Vostoka" [1], 1977, 81-89.
5. O nauchnom nasledii astronoma X-XI vv. Abu Nasra ibn Iraka. - IAI. 13, 1977, 219-232.
6. Matematicheskiye i astronomicheskiye rukopisi uchonykh Sredney Azii X-XVIII vv. Tash., 1981.

Mayer, L. A.
1. Islamic Astrolabists and Their Works. Geneve, 1952.

al-Mayhi, M., al-Biblawi, and Vollers, Karl
1. Fihrist al-kutub al-'arabiyya al-mahfuza bi'l-kutubkhana al-Khidiwiyya. al-Qahira. 5, 1890; 6, 1891.

Maystrov, Leonid Yefimovich (1920-1980)
1. Pribory i instrymenty istoricheskogo znacheniya. Nauchnye pribory. M., 1968.

Mazahéri, Aly (1914-1984)
1. La théorie atomique d'Omar Khayyâm. - AIHS. 2, 1949, No 7, 614-618.
2. Formes "sounnites" et formes "chi'ites" de chiffres Arabes ou les aventures de chiffres indiens en Islam. - ACIHS XIII (M., 1971). 3-4, 1974, 60-63.

al-Mazandarani (No 752)
1. Die Resala-ye Falakiyya des 'Abdollah ibn Mohammad ibn Kiya al-Mazandarani. Ein persischer Leitfaden des staatlichen Rechnungswesen (um 1363). Herausg. von W.Hinz. Wiesbaden, 1952.

Mazioglu, Hasibe
1. Sinân Paşa, Yusuf. - IA. 10, 1966, 661-670.

al-Mazruqi (No 307)
1. Kitab al-azmina wa'l-amkina. 1-2. Hyderabad, 1914.

Medovoy, Mikhail Yosifovich (1925-1962)
1. Ob odnom sluchaye primeneniya otritsatel'nyh chisel u Abu-l-Wafy. - IMI. II, 1958, 593-598.
2. Ob arifmeticheskom traktate Abu-l-Wafy (arabskiye kanonicheskiye drobi). - VIYT. 8, 1959, 101-106.
3. Ob arifmeticheskom traktate Abu-l-Wafy. - IMI. 13, 1960, 253-324.
4. Abu-l-Wafa i srednevekovaya bestsifrovaya vychislitel'naya tekhnika v stranah islama. ADK (fm). M., 1960.

Medvedev, Fyodor Andreyevich (1923-1993)
1. Rogovidnye ugly v "Kommentariyakh" al-Shirazi. - IMEN. 36, 1989, 84-92.

Mehren, August Ferdinand (1832-1907)
1. Codices arabicces Bibliothecae Regiae Hafnensis enumerati et descripti. Hafniae, 1851.
2. Codices orientales Bibliothecae Regiae enumerati et descripti. Pars tertia codices persicos, turcicos, hindustanicos etc. continens. Hafniae, 1857.

Menon, M. M.
1. Al-Beruni and his contribution to medieval Muslim geography. - Islamic Culture. 33, 1959, 213-218.

Menzel, Theodor
1. Ghazali. - EI. 2, 1927, 157-158.
2. Hadjdji Khalifa. EI. 2, 1927, 204-206.

Mercier, Raymond Paul (b. 1934)

1. Studies in the Medieval Conception of Precession. I-II. - AIHS. 26, 1976, No 99, 197-220. 27, No 100, 33-71.
2. The Greek 'Persian syntaxis' and the Zij-i Ilkhani. - AIHS. 34, 1984, No 112, 35-60.
3. The Astronomical Tables of Rajah Jai Singh Sawa'i. - IJHS. 19, 1984, No 2, 143-171.
4. The Parameters of the Zij of Ibn al-A`lam. - AIHS. 39, 1989, No 122, 22-50.
4. Accession and Recession: Reconstruction of the Paramctrs. - "From Baghdad to Barcelona" [1]. I. 1996, 299-247.

Meredith-Owens, G. M.

1. Miridit Uwins. Nuskhaha-yi khatti-yi farsi-yi Muza-yi Britaniya. Naql-i Iraj Afshar. - NKMDT. 4, 1966, 649-694.
2. Handlist of Persian Manuscripts 1896-1966 (in the British Museum). L., 1968.

Mestres, Angel

1. Maghribi Astronomy in the 13[th] Century: a Description of the Manuscript Hyderabad Andra Pradesh State Library 298 - "From Baghdad to Barcelona" [1]. I, 1996, 383-443.

Meyer, W.

1. Die Handschriften in Göttingen, 3. Universitätsbibliothek. Nachlasse von Gelehrten. Orientalische Handschriften. Berlin, 1894, 22-42, 145-150, 205-223, 314-383; "Handschriften" [2]. 3, 65-208.

Meyerhof, Max (1874-1945)

1. Die Optik der Araber. - Zeitschr. für ophtalmologische Optik mit Einschluss der Instrumentenkunde. 8, 1920, No 3, 16-29, 42-54, 86-90.
2. New Light on Hunain ibn Ishâq and his Period. - Isis. 8, 1926, No 28, 685-724; [11], No 1.
3. L'œuvre médicale de Maimonide. - Archeion. 11, 1929, 136-155; [11], No 8.
4. Von Alexandrien nach Bagdad: Ein Beitrag zur Geschichte des philosophischen und medizinischen Unterricht bei den Arabern. - Sitzungsber. der Konigl. Preuss. Akad. der Wiss., Phil.-Hist. Kl. 1930, 389-429.
5. Ibn Abi Usaybi`a. - EI. 2, 1927, 757.
6. `Ali ibn Rabban at-Tabari, ein persischer Arat des 9. Jahrhunderts n. Chr. - ZDMG. 85, 1931, 36-68.
7. `Ali at-Tabari's "Paradise of Wisdom", One of the Oldest Arabic Compendiums of Medicine. - Isis. 16, 1931. 6-54.
8. Das Vorwort zur Drogenkunde des Beruni. - QSNM. 3, 1932, 157-208.
9. Thirty Three Clinical Observations by Rhazes (circa 900 A.D.). - Isis. 23, 1935, 321-356, I-XIV; [11], No 5.
10. Ibn Ebi Usaybi'a. - IA. 5, 1958, 726-727.
11. Studies in Medieval Arabic Medicine, ed. Penelope Johnston. L., 1984.

Meyerhof, M. and Prufer, C.

1. Die Augenanatomie des Hunain b. Ishâq. - AGM. 4, 1910, 163-190.
2. Die Lehre vom Sehen bei Hunain b. Ishâq. - AGM. 6, 1912, 21-33.

Meyerhof, M. and Schacht, J.

1. Maimonides against Galen on Philosophy and Cosmology. - Bull. of the Faculty of Arts of the University of Egypt, 5, 1937, 52-88; Meyerhof [12], No 9.

Meyerhof, M. and Subhy Bey, G. P.

1. Abridged Version of "The Book of Simple Drugs" of Ahmad ibn Muhammad al-Ghafiqi by Gregorius Abu'l Farag (Barhebreus). Cairo, 1938-1940.

Mez, Adam (1869-1917)

1. Renaissance des Islam. Heidelberg, 1922.
2. Adam Mitz. Al-hadara al-islamiyya fi'l-qurun al-rabi` al-hijri. al-Qahira, 1957.

Micheau, Françoise

1. Hommes de sciences au prisme d'Ibn al-Qifti. - "Intellectuels et Militants dans le Monde Islamique". Cahiers de Méditerranée. 37, 1988, 81-106.

Michel, Henri

1. l'astrolabe linéaire d'al-Tusi. - Ciel et Terre. 1943, 3-4

2. Traité de l'astrolabe. P., 1947; 1983..

Mielgo, H.

1. A Method of Analysis for Mean Motion Astronomical Tables. - "From Baghdad to Barcelona" [1]. I, 1996, 159-179.

Mieli, Aldo (1879-1950)

1. La science arabe et son role dans l'évolution scientifique mondiale. Leyde, 1938; 1966.
2. Abu al-Farağ Yuhannā ibn al-'Ibrī al-Malatī (Barhebraeus). - Archeion, 25, 1943, 56-63.
3. Aldu Miili. al-`Ilm `inda al-`arab wa atharihi fi tatawwur al-`ilm al-`alimi, tarjama ``Abd al-Halim Najjar wa Mihammad Yusuf Musa. al-Qahira, 1371 h. [1952].

Mikhalevich, Galina Pavlovna

1. Vliyanie Beruni na razvitiye mineralogicheskoy literatury XIII-XV vv. na persidskotajikskom yazyke. - "al-Biruni" [7], 1973, 132-141.

Mikhaylova, Aleksandra Ivanovna

1. Katalog arabskikh rukopisey Instituta Narodov Azii. 2. Geograficheskiye sochineniya. M., 1961.

Miklukho-Maclay, Nikolay Dmitriyevich (1915-1975)

1. K istorii astronomicheskoy observatorii v Marage. - Nauchnyy Byulleten' LGU. 25, 1950.
2. Geograficheskoye sochineniye XIII veka na persidskom yazyke. - Uch. zap. Instituta Vostokovedeniya AN SSSR. 9, 1954, 186-188.
3. Opisaniye tajikskikh i persidskikh rukopisey Instituta Vostokovedeniya. I. M.-Lg., 1955.
4. Nekotoryye persidskiye i tajikskiye istoricheskiye, biograficheskiye i geograficheskiye rukopisi Instituta Vostokovedeniya AN SSSR. - Uch. zap. Instituta Vostokovedeniya AN SSSR., 16, 1958, 272-273.
5. Opisaniye tajikskikh i persidskikh rukopisey Instituta Narodov Azii. 2. M., 1961.
6. Opisaniye persidskikh i tajikskikh rukopisey Instituta Vostokovedeniya AN SSSR. 3. M., 1975.

Miklukho-Maclay, N.D., Akimushkin, O. F., Kushev, V. V., and Salahetdinova, M. A.

1. Nekotoryye redkiye i unikal'nyye persidskiye i tajikskiye rukopisi v sobranii Lelin-gradskogo otdeleniya Instituta Vostokovedeniya AN SSSR. - XXV Mezhdunar. kongress vosto-kovedov. Doklady delegatsii SSSR. M., 1960.

Al-Miknasi (No 913)

1. Bughya al-tullab fi sharh Munya al-hussab. Nashara Muhammad Suissi, Halab, 1983.

Millas Vallicrosa, José Maria (1897-1970)

1. Assaig d'historia de les idees fisiques i mathématiques a la Catalunya madieval. I. Barcelona, 1931.
2. La introduccion del cuadrante con cursor en Europa. - Anales de la Universidad de Madrid. 1931, No 3, 25-41, 174-185, 459-471; Isis, 17, 1932, 218-258.
3. Estudios sobre Asarquiel: el tratado de la asafea. - Anales de la Universidad de Madrid. 1932, No 1, 23-53; Archeion. 14, 1932, 392-419.
4. Las traducciones orientales en los manuscrites de la Biblioteca Catedral de Toledo, Madrid, 1942.
5. El "Liber de motu octave sphere" de Ṯabit ibn Qurra. - Al-Andalus. 10, 1945, 89-108.
6. Tres instrumentos astronómicos de los Museos de Tetuan y Madrid. - Al-Andalus. 12, 1947, 49-64.
7. Estudios sobre de la ciencia espagnola. Barcelona, 1949.
8. Estudios sobre Azarquiel. Madrid - Granada, 1943-1950.
9. Sobre bibliographia astronómica hispanoàrabe. - Al-Andalus. 19, 1954, 129-142.
10. Los primeros tratados de Astrolabio en la Espana àrabe. - Revista del Instituto de Estudios Islàmicos. Madrid. 3, 1955, 44-76.
11. Nuevos estudios sobre historia de la ciencia espagnola. Barcelona, 1960.
12. Abu Mash'ar al-Balkhi. EI^2. 1, 1960, 139-140.
13. Arab and Hebrew Contributions to Spanish Culture. - Cahiers d'Histoire Mondiale. 4, 1961, 731-752.
14. Ibn Al-Muṯanna et le prologue de son commentaire aux tables d'al Jwarizmi. - Mélanges Alexandre Koyre. I. L'aventure de la science. P., 1964, 387-396.

Millas Vendrell, E.

1. El commentario de Ibn al Muṯannâ a les Tablas Astrónomicas de al-Jwârizmî. Estudio y edición critica del texto latino, en la versión de Hugo Sanctallensis. Madrid - Barcelona, 1963.

Miller, Konrad

1. Mappae Arabicae. Arabische Welt- und Länderkarten des 9.-13. Jahrhunderts in arabischer Urschrift, lateinischer Transkription und Ubertragung in neuzeitlichen Kartenskizzen. 1-6. Stuttgart, 1926-1931; Ausgabe von Fuat Sezgin, 1-2. F. M., 1994.

al-Millí, Badr al-Din

1. al-Thiql al-naw`i `inda Abi'l-Rayhan Muhammad ibn Ahmad al-Biruni. - ISHAS 2, 1979, Suppl. 78.

Mingana, Alphonse (1881-1937)

1. Catalogue of the Arabic manuscipts in the John Rylands Library. Manchester, 1934.

Minorsky, Vladimir (1877-1966)

1. `Omar Khaiyam. - EI. 3, 1936, 485-489.
2. Hudud al-`Alam. The Regions of the World, a Persian Geography, traslated and ex-plained by V.Minorsky, L., 1937; re-ed. by Fuat Sezgin, F. M., 1993.
3. On some of Biruni's informants. - "al-Biruni" [4], 1951, 233-236.
4. Omer Hayyâm. - IA. 9, 1962, 472-480.

Minuwi [Minovi], Mujtaba

1. Abu Rayhan Biruni. - "al-Biruni" [10], 1973, 1-53.

Minovi, M. and Minorsky, V.

1. Nasir al-Din Tusi on finance. - BSOAS. 10, 1940, 751-789.

Miquel, André

1. La géographie humaine du monde musulmane jusqu'au milieu du XI^{e} siècle. 1-4. P.- La Haye, 1964-1968.
2. al-Mukaddasi. - EI^{2}. 7, 1975, 422-423.
3. Geography. - EHAS. III, 751-795.

Mirbabayev [Mirboboyev], A. K.

1. Pedagogicheskiye vzglyady Abuali Ibn-Siny. - IAN. Taj. SSR., otd. obshch. nauk. 1980, No 3, 62-65.

Mirza Bala

1. Humâyun. - IA. 5, 1952, 628-631.

Mirzoyev, Abdulghani Muhamedovich (1908-1976)

1. Hikoyatho oid ba Ibni Sino va shahsiyati u. Stalinabad, 1953.
2. Katalog vostochnykh rukopisey Akademii nauk Tajikskoy SSR. 1-4, Dushanbe, 1960-1970.

Mitchell, J.

1. The History of Maritime Wars of the Turks. L., 1831.

Mitra, P. N.

1. Omar Khayyam the mathematician. - Indo-Iranica. 1, 1946-1947, No 3, 13-20.

Mittwoch, Eugen (1867-1942)

1. Ibn Maimun. - EI. 2, 1927, 400-401.
2. Ibn al-Kifti. - EI. 2, 1927, 398.
3. Ibn Meymun. - IA. 5, 1958, 772-774.
4. Ibnulkiftî. - IA. 5, 1958, 863-866.

Mizrahi, Eliya (No 943)

1. Sefer hamispar. Istanbul, 1521.

Moesgaard, Kristian Peder (b. 1939)

1. Thabit Ibn Qurra between Ptolemy and Copernicus: an analysis of Thabit's Solar theory. - AHES. 12, 1974, 199-216.
2. Thabit ibn Qurra between Ptolemy and Copenicus. - Avant, avec, après Copernic. La représentation de l'Univers et ses conséquences épistémologiques. P., 1975, 67-70.

Mogenet, J.

1. Les instruments de science dans l'art et l'histoire. Rhode - St. Genèse, 1965.
2. Scientific instruments in art and history, transl. R.E W.Maddison. N.Y., 1967.

Moghadam, M. E. and Armajani, Y.S

1. Descriptive Catalog of the Garrett Collection of Persian, Turkish and Indian Manuscripts in the Princeton University Library. - Princeton Oriental Texts. 6. Princeton, 1939.

Mohaghegh [Muhaqqiq], Mahdi

1. Faylasuf-i Rayy Muhammad ibn Zakariya al-Razi. Tehran, 1349 s.h. [1970].
2. Risala-yi Abu Rayhan dar fihrist-i kitabha-yi Razi. - "al-Biruni" [10], 1973, 399-410.
3. al-Katibi. - EI^2. 4, 1976, 762.
4. Notes on al-Biruni's Fihrist. - "al-Biruni" [9], 1979, 228-231.

Mohammed, Ovey Nelson

1. Averroes' Doctrine of Immortability: a Matter of Controversy. Waterloo, Ont., 1984.

Montgomery Watt, W.

1. The Authenticity of the Works Attributed to al-Ghazzâlî. - JRAS. 1952, 24-45.
2. The Faith and Practice of al-Ghazâlî. L., 1953.
3. al-Ash`ari. - EI^2. 1, 1954, 694-695.
4. Islamic Philosophy and Theology. Edinburgh - Chicago, 1962.
5. Abu Zayd Balki. - EIr. 1, 1985, 399-400.

Moody, Ernest Addison

1. Galileo and Avempace. - J. of the History of Ideas. 1951, 163-193, 375-421.

Moody, E. A. and Clagett, M.

1. The Medieval Science of Weights (Scientia de ponderibus). Madison,1952.

Morata, N.

1. Un catalogo de los fondos arabos primitivos de El Escorial. - al-Andalus. 2, 1934, 87-181.

Mordtmann, J. H. (1852-1932)

1. Des Observatorium des Taqî-ed-dîn zu Pera. - Der Islam. 13, 1923, 82-96.
2. Die orientalischen Handschriften der Sammlung A. D. Mordtmann. - Der Islam. 14, 1925, 361-377; "Handschriften" [2]. 2, 661-677.
3. Ewliya Celebi. - EI. 2, 1927, 33-34.
4. Hadjdji Khalifa. - EI. 2, 1927, 217-218.
5. Ibrahim Muteferriqa. - EI. 2. 1927, 439.

Mordtmann, J. H. and Duda, H. W.

1. Ewliya Celebi. - EI^2. 2, 1963, 717-720.

Morelon, Régis

1. Les textes astronomiques arabes de Thabit B, Qurra. 1-2. Thèse, P, 1982.

1a. Les deux versions du traité de Thabit b. Qurra sur le mouvement de deux luminaires. - MIDEO. 18, 1988, 9-44.

2. Thabit b. Qurra and Arab Astronomy in the 9th Century. - ASP. 4, 1994, 111-139.
3. General Survey of Arabic Astronomy. - EHAS. I, 1996, 1-19.
4. Eastern Arabic Astronomy between the Eighth and Eleventh Centuries. - EHAS. I, 1996, 20-57.

Morewedge, Parviz

1. The Metaphysica of Avicenna (Ibn Sina). A Critical Translation - Commentary and Analysis of the Fundamental Arguments in Avicenna's Metaphysica in the Danish Nama-i `ala'i (The Book Scientific Knowledge). N.Y., 1973.

Morley, W. H.

1. A Descriptive Catalogue of the Historical Manuscripts in the Arabic and Persian Languages Preserved in the Library of the Royal Asiatic Society. L., 1854.

Morochnik, Samuil Borisovich (1910-1981)

1. Filosofskiye vzglyady Omara Khayyama. Stalinabad, 1952.

Morochnik, S. B. and Rosenfeld, B. A.

1. Omar Khayyam - poet, myslitel', uchonyy. Stalinabad, 1957.
2. Omar Khayyam. - FE. 4, 1967, 138-139.

Mouhasseb (Muhasib), Jamal

1. Essai sur la classification des sciences. Damas, 1953.

Moussa (Musa), Jalal M.

1. Materia medica and its Faculties by Hunayn ibn Ishaq and Ibn Sina. Jalal Muham-mad Musa. al-Adwiya al-mufrada wa ma`rifa quwwaha `inda Hunayn ibn Ishaq wa Ibn Sina. - ISHAS 1, 1, 1977, 805-832; II, 1978, 341-342.

Mrozek, Anna

1. Wybrane poglady filozoficzne Ikhwan as-Safa z Basry (Glosnych lub Czystych Braci), encyklopedistow X wieku. - Studia filozoficzne. 1960, No 6 (21), 131-155.

Muhamediyev, Hamid

1. Planimetricheskaya chast' "Kitab al-shifo". - Uch. zap. Leninabadskogo gos. ped. instituta. 15, 1962, 5-8.

Muhammadiyev, Idi Ruziboyevich

1. Tarzhsi amali zarb dar risolai "Khulosat-ul-hisob"-i Bahouddin Omuli. - Maktabi Soveti, 1988, No 2, 44-46.
2. Bahouddin Amuli i yego matematicheskaya literatura v Sredney Azii v XVI-XIX vv. (po rukopisnym istochnikam). - ADK(i). Dushanbe, 1989.

Mujtabai, Fathallah

1. Biruni wa Hind. - "al-Biruni" [10], 1973, 242-291.

Mukhlis, `Abdallah

1. Nafais al-khizana al-Khalidiyya fi'l-Quds al-sharif. - Majalla majma` al-ligha al-`arabiyya bi-Dimashq. 4, 1926, 366-369, 409-412.

Muller, David Heinrich (1846-1912)

1. Al-Hamdânî's Geographie der arabischen Halbinsel. Nach den Handschriften von Berlin, Constantinopel, London, Paris und Strassburg. Zum ersten Mal herausgegeben von David Heinrich Muller. Leiden, 1884-1891; re-ed. by Fuat Sezgin. F. M., 1993.
2. Die Burgen und Schlösser Südarabiens nach dem Iklîl des Hamdânî. - Sitzungsber. der Kais. Akad. der Wiss., Phil.-hist. Classe. Wien. 94, 1879, No 1, 335-423, 97, 1881, No 3, 955-1050; re-ed. by Fuat Sezgin: "Studies on al-Hamdani", 1993, 117-304 .

Muller, M. J.

1. Philosophie und Theologie des Averroes. Munchen, 1859.

"al-Multaqi"

1. Al-Multaqi ad-dawli al-awwal hawl ta'rikh ar-riyadiyat al-`arabiyya. Al-Jazair 1, 2, 3 disimbir 1986. Mulakhkhasat al-abhath. Premier Colloque International sur l'Histoire des Mathématiques Arabes. Alger 1, 2, 3 Décembre 1986. Résumés des communications. Al-Kuba al-qadima - Vieux-Kouba, 1986.
2. Al-Multaqi ad-dawli al-thani hawl ta'rikh ar-riyadiyat al-`arabiyya. Tunis. Deuxième Colloque Maghrebin sur l'Histoire des Mathématiques Arabes. (Tunis, 1988), Tunis, 1995.

Muminov, Ibrahim Mumin ughli (1908-1974)

1. Vvedediye. - "Materialy" [1], 1957, 11-66.
2. Vydayushchiesya mysliteli Sredney Azii. Tash., 1966.
3. Ali Qushchining bir risolasi haqida. Ob odnom traktate Ali Kushchi. - al-Qushji [1], 1968, 5-27. Izbrannye proizvedeniya. 2. Tash., 1970, 198-204.
4. Nauchnyy metod poznaniya Beruni. Tash., 1971.
5. Abu Rayhan Beruni - vydayushchiysya uchonyy-entsiklopedist. - "al-Biruni" [5], 1972, 3-24.
6. Velikiy entsiklopedist iz Khorezma. Tash., 1973.

7. Khorazmlik buyuk entsiklopedist olim. Toshkent, 1973.
8. Abu Rayhon Beruniy - buyuk entsiklopedist. - "al-Biruni" [6], 1973, 3-25.
9. Beruni kak istorik nauki. - "al-Biruni" [7], 1973, 3-15.
10. Beruniy - fan tarikhchisi. - "al-Biruni" [8]. 1973, 3-18.
11. Velikiy uchonyy - entsiklopedist. - ONU. 1973, No 7-8, 12-26.
12. Velikiy éntsiklopedist iz Khorezma. K 1000-letiyu so dnya rozhdeniya Biruni. M., 1974.
13. Vydayushchiysya myslitel' Sredney Azii. - "Materialy" [2], 1976, 7-46.

Munajjid, `Abd al-Kadir

1. al-Makhtutat al-`arabiyya fi maktaba al-Kunghris al-Aamiriki. Beirut, undated.

al-Munajjid, Salah al-Din

1. S.al-Munaggid. Catalogue des Manuscrits Arabes del'Ambrosienne de Milan. 2. Le Caire, 1960.

al-Munajjim (No 121)

1. Risala fi'l-musiqi. Nashara M. Bahja al-Athari. - Majalla al-Majma` al-`ilmi al-`Iraqi. Baghdad. 1, 1950, 113-124.
2. Risala fi'l-musiqi. Nashara Z. Yusuf. al-Qahira, 1964.

Munirov, Qavamuddin Munir ughli

1. "Tafhim"ning Toshkent qulyozma nushasi haqida. - "al-Biruni" [5], 1972, 123-129.
2. "Tafhin"ning qulyozma nushalari. - ONU. 1973, No 7-8, 104-108.

Munk, Salomon (1805-1867)

1. Sur les découvertes attribuées aux Arabes, relativement aux inégalités dans le mouvement de la Lune. - CR. 16, 1843, 1444-1446.
2. Nouvelle note concernant la part qu'ont eues les Arabes à la découverte des inégalités du mouvement de la Lune. - CR. 17, 1843, 76-80.

Muntasir, `Abd al-Halim

1. Ta'rikh al-`ilm wa dawr al-`ulama al-`arab fi taqaddumihi. al-Iskandariyya, 1969.

Munzawi, `Ali Naqi

1. Fihrist-i kitabkhana-yi ihdai Aqa-yu Sayyid Muhammad Mishkat ba Kitabkhana-yi Danishgah-i Tehran. 1-2. Tehran, 1330-1332 s.h. [1951-1953].

Munzawi [Monzavi], Ahmad

1. A Catalogue of Persian Manuscripts. 1. Tehran, 1969.

Munzawi, A., Afshar, Iraj, Danish-Pazhuh, Muhammad Taqi, Munzawi, `Ali Naqi

1. Fihrist-i kitabkhana-yi Majlis-i Shawra-yi Milli. 11- 12, 14-16. Tehran, 1344-1348 s.h. [1965-1969].

al-Muqaddasi (No 215)

1. Descriptio imperii moslemici auctore al-Muqaddasi [Kitab ahsan al-taqasi fi ma`rifa al-aqalim]. Ed. M.J. de Goeje, Lugduno-Batavorum, 1906; re-ed. by Fuat Sezgin. F.M., 1992.
2. Ahsanu'l-taqasim fi ma`rifa al-aqalim. English transl. by G.S.A.Ranking and Rizkallah F.Azoo [`Izzu]. Bombay, 1897-1910. Re-ed. by Fuat Sezgin, F. M., 1989.

Murdoch, John E. (b. 1927)

1. Euclid: Transmission of the Elements. - DSB. 4, 1971, 437-459.

Mursi Ahmad, Muhammad

1. Ibn al-Haytham wa Hall shukuk Uqlidis. Ibn al'-Heysam i razresheniye somneniy Yevklida. - Vtoraya konf. semitologov (Tbilisi, 14-18 iyunya 1966 g.), No 5. M., 1966.

Mursi, `Ali Hasan

1. Risala al-Hasan ibn al-Haytham fil-daw. al-Qahira, 1337 h. [1938].

Murzayev, Eduard Makarovich

1. Vydayushchiysya arabskiy geograf i istorik X veka al-Masudi. - IAN. SSSR., ser. geogr., 1958, No 2, 107-109.
2. The significance of al-Mas'udi for the works of Russian and Soviet geographers. - "al-Nas`udi" [1], 1960, 14-19.

Musa, Muhammad Yusuf

1. al-Nahiya al-ijtima` iyya wa'l-siyasiyya fi falsafa Ibn Sina. La sociologie et politique dans la philosophie d'Avicenne. - "Ibn Sina" [4], I, 1952.

Musahib [Mossaheb], Ghulam Husayn

1. Jabr-i muqabala-yi Khayyam. Tehran, 1317 s.h. [1938].
2. Hakim `Umar Khayyam ba `unwan-i `alim-i jabr. Hakim Omare Khayyam as an al-gebraist. Teheran. 1339 s.h. [1960].

Musharraf-ul-Hakk, Mohammed

1. Persische und hindustanische Handschriften der Deutschen Morgenländischen Gesellschaft. Halle/S., 1911.

Musharrafa, `Ali Mustafa

1. Muhammad ibn Musa al-Khwarizmi wa atharuhu fi `ilm al-jabr. - "al-Jam`iyya al-Misriyya' [1], undated, 34-44.
2. Ibn al-Haytham ka `alim riyadi. - "al-Jam`iyya al-Misriyya" [1], undated, 154-156.

Mushir al-Dawla (No 1423)

1. Kitab-i hisab. Tehran, 1263 s.h. [1847].

Mushiri, Ch.

1. Mirza Sayyid Ja`far-khan Mushir al-Dawla. - Nama-yi farhang, Mashhad. I. 1330 s.h. [1952], 349-356.

Mustawfi, Jalal

1. Istifada-yi danishmandan-i Maghrib-i zamin az jabr u muqabala-yi Khayyam. Tehran, 1339 s.h. [1960].

Mutafarriqa (Müteferrika) (No 1328)

1. Fuyudat-i maghnatisiyya. Istanbul, 1144 h. [1732].

Mutallibov, S. M.

1. "Devonu lugat-il-turk" Mahmuda Kashgarskogo (per., komm., issl.). Tash., 1967.

Muwafi, A.

1. A treatise on the Construction of the Three Conic Sections. - ACIHS XVI, 3, 1981, 35.

Muzafarova, Hanifa Rahim zoda (b. 1940)

1. O matematicheskikh glavakh entsiklopedicheskogo proizvedeniya "Durra-at-Taj li Gurra-ad-Dubaj" (Zhemchuzhina korony dlya ukrasheniya Dubaja) Kutbeddina Shirazi. - Uch. zap. Taj. gos. universiteta, trudy mekh.-mat. fakul'teta. 1, 1970, No 1, 85-93.
2. Zhizn' i tvorchestvo Kutbaddina Shirazi. - IAN Taj. SSR (obshch. nauki). No 2(68), 1972, 19-24.
3. O planimetricheskom razdele "Zhemchuzhiny korony". - Uch. zap. Taj. gos. universiteta, trudy mekh.-mat. fakul'teta. 2, 1972, 207-222.
4. Matematicheskiye glavy "Zhemchuzhiny korony dlya ukrasheniya Dubaja" ("Durraat-taj") Kutbaddina Shirazi. ADK (fm). M., 1974.
5. Arifmetika Nikomakha v izlozhenii Kutbaddina Shirazi. - Matematika i metodika yeyo prepodavaniya. I. Dushanbe, 1974, 124-131.
6. Arifmeticheskiye i teoretiko-chislovyye aspekty knigi VII "Nachal" Yevklida v izlozhenii Kutbaddina Shirazi. - Issledovaniya po matematike. Dushanbe, 1977, 79-84,
7. O matematicheskoy rukopisi "Sbornik po nauke arifmetiki" iz sobraniya Instituta Vostokovedeniya AN Uz. SSR. - Issledovaniya po matematike. Dushanbe., 1977, 85-92.
8. O nekotorykh matematicheskikh traktatakh Latifa Muhammeda ibn Baba. - Issledovaniya po matematike. Dushanbe, 1977, 93-100.
9. Osnovnyye ponyatiya planimetrii "Nachal" Yevklida v izlozhenii Kutbiddina Sherazi, Ibn Sina i ikh sovremennikov. - IAN Taj. SSR. otd. fiz.-mat., khim. i geol. nauk. 1980, No 3, 16-23.

10. Indiyskaya matematika v Sredney Azii posle al-Khorezmi. "al-Khwarizmi" [4], 1985, 240-247.
11. Arithmetic of Nicomachos in Durrat al-Taj by Qutbuddin Shirazi. - SHMS. 1985, 9, No 1, 47-55.
12. Mirat al-Hisab. - A Persian translation of Bhaskara's Lilavati by Ibn Yalb. - SHMS. 9. 1985, No 2,

"Muzykal'naya estetika"

1. Muzykal'naya estetika stran Vostoka. Pod red. V.P.Shestakova. M., 1967.

Mzik, Hans von

1. Ptolemaeus und die Karten der arabischen Geographen. - Mitt. der Kais.-Kon. geogr. Gesellschaft, Wien, 58, 1915 152-175.
2. Afrika nach der arabischen Bearbeitung des Geographike hyphegesis des Klaudios Ptolemaios von Muhammed ibn Musa al-Huwarizmi. - Denkschriften der Kais. Akad. der Wiss., Phil.-hist. Kl., 59, No 4, Wien, 1916; "Mathematical Geography" [2], 1992, 317-425.
3. Idrisi und Ptolemaus, - Orient. Literaturzeitung. 15, 1921, 404-405; "Studies on al-Idrisi" [3], 1992, 42-43.
4. Osteuropa nach der arabischen Bearbeitung des Geographike hyphegesis des Klaudios Ptolemaios von Muhammed ibn Musa al-Huwarizmi. - Wiener Zeitschr. fur die Kunde des Morgenlandes, 1936, 161-193; "Mathematical Geography" [2], 1992, 507-540.

al-Nabulusi, Nadir

1. Muqaddima li'l-tahqiq al-Kashi. - al-Kashi [9], 1977, 11-15.
2. Makhtutat Miftah al-hisab. - al-Kashi [9], 1977, 31-34.
3. Nabulsi Nader. Commentaire. - al-Kashi [9], 1977, Fr. 1-67.

Nader, Albert N.

1. Le système philosophique des Mutazila: premiers penseurs de l'Islam. Beyrouth, 1956.

Nadir, Nadi

1. Abu al-Wafa' on the Solar Altitude. - The Mathematics Teacher. 53, 1960, No 6, 461-463; "Kennedy" [1], 280-283.

Nadji, Mehdi

1. Karadjis "Erschliessung verborgener Gewässer", ein Lehrbuch der Geowissenschaften aus dem 11. Jahrhundert. - Technikgeschichte. 39, 1972, 11-24.

Nadvi, Syed H. H.

1. Al-Biruni and his Kitab al-jamahir fi-ma`rifah al-jawahir: Ethical Reflections and Moral Philosophy. - "al-Biruni" [9], 1979, 530-544.

Nadwi, Muinuddin

1. Catalogue of the Arabic and Persian Manuscripts in the Oriental Public Library at Bankipore. 15, Calcutta, 1919.

Nadwi [Nadvi], Sayyid Sulayman

1. `Umar Khayyam, `Azamgarh, 1932.
2. Some Indian Astrolabe Makers. - Islamic Culture. 9. 1935, No 4, 621-631.
3. Indian Astrolabe Makers. - Islamic Culture. 11.1937, No 1, 512-541.
4. Muslim Observatories. - Islamic Culture. 20. 1946, No 3, 267-281.
5. The Arab Navigation. Lahore, 1966.

Naficy [Nafisi], Sa`id (1895-1967)

1. Ahwal wa athar-i `Umar-i Khayyam. Tehran, 1310 s.h. [1931].
2. Ahwal wa ash`ar-i farsi-yi Shaykh Baha'i. Tehran, 1316 s.h. [1937].
3. Zindagi u kar u andisha u ruzgar-i Pur-i Sina. Tehran, 1333 s.h. Avicenna. His Life, Works, Thought and Time. Tehran, 1954.
4. Ash`ar-i farsi-yi Khwaja. - "al-Tusi" [21], 1957, 34-44.
5. Bibliographie des principaux travaux européens sur Avicenne. Téhéran, 1959.
6. Fihrist-i kitabkhana-yi Majlis-i Shura-yi Milli. 6. Tehran, 1344 s.h. [1965].

Nagy, A.

1. Die philosophischen Abhandlungen des Ja'qûb ben Ishâq al-Kindî. Münster, 1897.

Naimov, N.

1. Filosofskiye i logicheskiye vozzreniya Fakhriddina Razi. - ADK(fs). Tash., 1971.
2. Fakhriddin Razi. - "Iz filosofskogo naslediya" [1], 1972, 199-233.

Najibullah

1. Abouraihan Al-Beruni and His Time. - Afghanistan. 6, 1951, 17-40.

al-Najjar, `Abd al-Salam Muhammad

1. Makhṭuṭat Maktaba Rawda Khairi basha. - MMMA. 6, 1960, 59-66, 9, 1963, 231-242.

Najmabadi, Mahmud

1. Sharh-i hal wa maqam-i Muhammad-i Zakariya-yi Razi, pizishk-i nami-yi Iran. Tehran, 1318 s.h. [1939].
2. Muallifat u musannifat-i Abu Bakr Muhammad ibn Zakariya Razi, hakim u tabib-i buzurg-i Iran. Tehran. 1339 s.h. [1960]. Bibliographie de Rhazes "Abou Bakr Mohammed Ibn Zakaria Razi" célèbre médecine et philosophe iranien. Téhéran, 1960.

Nakhjawani, Muhammad

1. Fihrist-i kitabkhana-yi Dawlati-yi Tarbiyat-i Tabriz, kutub-i khaṭṭi. Tabriz, 1329 s.h. [1950].

Nallino, Carolo Alfonso (1872-1938)

1. Al-Khuwarizmi e suo rifacimento della Geografia di Tolomeo. - Rend. della Reale Accad. dei Lincei. Cl. di sci. mor., stor. e filol. (5), 2, 1894-1895; [6], 458-532; "Mathematical Geography" [2], 1992, 91-109.
2. I manoscritti arabi, turchi e siriaci della R. Accad. delle scienze di Torino. - Memorie della R. Accad. delle scienze di Torino (2). 50, 1901, 1-91, 92-101.
3. Ta'rîkh `ilm al-falak `inda al-`arab fî'l-qurûn al-wustâ. Roma, 1911.
3a. Astrology. EI. 1, 1913, 494-497.
3b. Astronomy. EI. 1, 1913, 497-501.
3c. Asturlab. EI. 1, 1913, 501-502.
4. Al-Battani. - EI. 1, 1913, 680-681; EI². 1, 1966, 1059-1060.
5. Un mappamondo arabo disegnato nel 1579 da `Ali ibn Ahmad al-Sharafi di Sfax. - Boll. Reale Soc. Geogr. Ital. 5, 1916, No 5, 721-736; [6], 533-548.
6. Raccolta di scritti editi e inediti. 5. Astrologia, astronomia, geografia. Roma, 1944.
7. Astrologia e astronomia presso i musulmani. - [6], 1-87.
8. Storia dell'astronomia presso gli Arabi nel Medioevo. - [6], 88-329.
9. Biografie di astrologi e astronomi arabi. - [6], 330-344.
10. Astrolabio. - [6], 345-347.
11. Zu Giagminis Astronomie. - [6], 404-407.
12. Battânî. - IA. 2, 1952, 577-578.

Namus, M. S.

1. Ibn al Haitham - the Greatest Physicist in Islam. - "Ibn al-Haytham" [1], 124-134.

al-Naqshbandi, `Usama Nasir and Zamya Muhammad `Abbas

1. Makhtutat al-hisab wa'l-handasa wa'l-jabr fi maktaba al-Mathaf al-`Iraqi. Baghdad, 1980.
2. Makhtutat al-falak wa'l-tanjim fi maktaba al-Mathaf al-`Iraqi. Baghdad, 1982.

Narducci, Enrico (1832-1893)

1. Intorno ad una traduzione italiana, fatta nel secolo decimoquarto, del trattato d'ottica d'Alhazen, matematico del secolo undecimo, e ed altri lavori di questo scienzato. - BBSMF. 4, 1871, 1-48, 137-139.

Narkhojayev, Kadir [Norkhujayev, Qodir Norkhujja ughli]

1. Nauchnyye raboty velikogo uzbekskogo myslitelya Biruni. - Geodeziya i kartografiya. 1971, No 11, 68-72.
2. Geodezicheskiye raboty Beruni. - ONU. 1973, No 7-8, 91-96.
3. Beruni i yego raboty po geodezii. Tash., 1973.
4. Beruniy wa uning geodeziya faniga doir ishlari. Toshkent, 1973.
5. Beruniy va geodeziya fani. - "al-Biruni" [8], 1973, 154-158.
6. Geodezicheskiye raboty Beruni. Tash., 1977.

Narqulov [Norqulov], N. K.

1. Beruni i Khorezm. Tash., 1973.

2. Beruniy va Khorazm. Toshkent, 1973.

al- Nasawi (No 341)

1. Dostatochnoye ob indiyskoy arifmetike. Per. i prim. M.I.Medovogo. - IMI. 15, 1963, 381-430.

Nasir, Naseer Ahmad

1. Ibn al-Haitham and His Philosophy. - "Ibn al-Haytham" [1], 80-93.

Nasir-i Khusraw (No 393)

1. Nâçir ad-Dîn ben Khosroû. Le livre de la felicité. Ed. et trad. par E.Fagnan. - ZDMG. 34, 1880, 643-674.
2. Nâsir Chusrau's Rušanâinâma oder Buch der Erleuchtung. Ubers. von H.Ethé. - ZDMG. 33, 1879,, 649-665; 34, 1880, 428-464, 617-642.
3. Sefer Naméh. Relation du voyage de Nassiri Khosrau en Syrie, en Palestine, en Egypte, en Arabie et en Perse pendant les années de l'Hégire 437-444 (1035-1042). Publié, trad. et annoté par Charles Schefer. P., 1881; rééd. par Fuat Sezgin, F.M., 1994.
4. Auswahl aus Nâsir Chusraus Kasîden in Text und Uebersetzung nebst Noten und kritisch-bibliographischen Appendix von H.Ethé. - ZDMG. 36, 1882, 478-508.
5. Diary of a Journey through Syria and Palestina by Nâsir-i Khusrau in 1047 A.D. Transl. from the Persian and annot. by Guy le Strange. L., 1893; "Geography of Palestine", ed. by Fuat Sezgin, F.M., 1993, 223-312.
6. Safar-nama. Tehran, 1312 h. [1894]; 1335 s.h. [1956].
7. Safar-nama. Ba inzimam-i du mathnawi Raushanay-nama u Sa`adat-nama dara-yi muqaddima ba qalam-i M.Ghani-zada. Barlin, 1341 h. [1923].
8. Kitab zad al-musafirin. Ba ihtimam-i M.Badhl al-Rahman. Barlin, 1341 h. [1923].
9. Wajh-i din. Ba ihtimam-i Taqi Irani. Barlin, 1343 h. [1924].
10. Diwan-i ash`ar u Raushanai-nama u Sa`adat-nama. Ba muqaddima-yi Hasan Taqi-zada wa ihtimam-i Mujtaba Minuwi. Tehran, 1304-1307 h. [1925-1928]; Isfahan, 1335 s.h. [1956].
11. Safar-namé. Kniga puteshestviya. Per. Ye.E.Bertel'sa. M.-Lg., 1933.
12. Khwan al-ikhwan, ta`lif Khusraw `Alawi. Ba sa`i u ihtimam u tashih-i duktur Yahya al-Khashshab. al-Qahira, 1359 h. [1940]. Han al-ihwan. Publié par Y.al-Khachab. Le Caire, 1940.
13. Nosir Khisrou. Izbrannoye. Proza i poeziya. Per. A.Adalis i dr. Stalinabad, 1949; 1954.
14. Nasir-i Khusraw. Six Chapters, or Shish Fasl Also Called Ravshana'i-nama. Ed. and transl. by W. Ivanov. Bombay-Leiden, 1949.
15. Gushayish u rahayish, ta`lif-i Nasir-i Khusraw Marwazi Qabadiyani. Ba tashih u muqaddima-yi Sa`id Nafisi. Kitab Gusha'ish wa Raha'ish. The Book of Unfettering and Liberation. Ed. by Sa'id Nafisi. Bombay, 1327 s.h. [1947] - Leiden, 1950.
16. Abu Mu`in Nasir-i Khusraw Qabadiyani Marwazi Yumgani. Kitab jami` al-hikmatayn. Ba tashih wa muqaddima-yi farsi wa faransawi-yi Hinri Kurbin wa Muhammad Mu`in. Tehran, 1332 s.h. [1953]. Nasir-e Khosraw. Kitab-e Jami' al-hikmatain. Le livre réunissant les deux sagesses ou harmonie de la philosophie grecque et de la théosophie ismaélienne. Ed. par H.Corbin et M.Mo'in. Téhéran - Paris, 1953.
17. Nosiri Khisrav. Gulchine az devoni ash"or. Tartibdihanda wa muallifi sarsuhan K.Ayni. Stalinabad, 1957.

Nasr, Seyyed Hossein

1. An Introduction to Islamic Cosmological Doctrines. Conceptions of Nature and Methods used for its Study by Ikhwan al-Safa, al-Biruni and Ibn-Sina. Cambridge, 1964.
2. Three Muslim Sages: Avicenna, Suhrawardi, Ibn Arabi. Cambridge, 1964.
3. Conceptions of Nature in Islamic Thought. Tehran, 1964.
4. Science and Civilizations in Islam. Cambridge, 1968.
5. `Ilm wa tamaddun dar islam. Tarjuma-yi Ahmad Iram. Tehran, 1350 s.h. [1971].
6. Al-Biruni: An Annotated Bibliography. Tehran, 1352 s.h. / 1393 h. [1973].
7. An Annotated Bibliography of Islamic Science. 1. Tehran, 1975.
8. Philosophy and Cosmology. - The Cambridge History of Iran, 4. 1975, 378-395.
9. Qutb al-Din al-Shirazi. - DSB. 11, 1975, 247-253.
10. al-Tusi, Nasir al-Din. - DSB. 13, 1976, 508-514.
11. Islamic Science: An Illustrated Study. L., 1976.
11a. An Introduction to Islamic Cosmological Doctrines: conceptions of Nature and Methods Used for Its Study by Ikhwân al-Safâ', al-Bîrûnî, and Ibn Sînâ. L., 1978.
12. Al-Biruni as Philosopher. - "al-Biruni" [9], 1979, 400-406.
13. Sciences et savoir en Islam. Trad. par J.-P.Guinhut. P., 1979.
14. Reflections on Methodology in the Islam Sciences. - AH. 4-5, 1979-1980, 21-30, Arab. 67-72.

Nasrallah, J.

1. Catalogue des manuscrits du Liban. 1-3. Beirut, 1958-1961.

Nasrat, Haidar Ali

1. La théorie de l'émanation chez Avicenne, al-Baghdadi et Sohrawardi. P., 1973.

Nassar, Nassif

1. La pensée réaliste d'Ibn Khaldûn. Thèse. P., 1968.

Nasyrov, R. N.

1. Voprosy istiny v trudakh Abu Rayhana Beruni. ADK (fs). Tash., 1971.
2. Farabi o ratsional'nom poznanii. - ONU. 1973, No 6, 64-66.
3. Beruni o roli sravnitel'nogo metoda v nauchnom poznanii. - ONU. 1973, No 7-8, 39-43.
4. Haqiqat tughrisida Beruniy ta"limoti. - "al-Biruni" [8], 1973, 80-93.

Nath Sharma, Viendra

1. Jay Singh. - ENWC. 1997, 461-463.

Nau, François

1. Le traité de Sévère Sébokt sur l'astrolabe plan, publié pour la première fois d'après un MS de Berlin. - JA (9). 13, 1899, 56-101, 238-303.
2. Notes d'astronomie syrienne. (I) Les configurations des planètes d'après Bardesane. (II) Ataliâ, ou le dragon célèste, cause éclipses de lune d'après Sévère Sébokt. (III) La plus ancienne mention orientale des chiffres indiennes. (IV) La date du traité de Sévère Sébokt sur l'astrolabe plan. - JA (10). 16, 1910, 209-228.

Naumkin, Vitaliy Vyacheslavovich

1. Traktat Gazali "Voskreshenie nauk o vere" - al-Ghazzali [10], 1980, 9-88.

Nawai, `Alishir (1441-1501)

1. Majalis al-nafais. Kriticheskiy tekst, podgotovlennyi S.Ganiyevoy. Tash., 1961.

Nawshervi, Abdur Rauf

1. Al-Biruni's Contribution to Natural Sciences. - "al-Biruni" [9], 1979, 582-586.

al-Nayrizi (No 135)

1. Anaritii decem libros priores Elementorum Euclidis commentarii. Ed. M.Curtze. - Euclidis opera omnia. 9. Lpz., 1899.
2. Traktat al-Fadla ibn Hatima al-Nayrizi o dokazatel'stve izvestnogo postulata Yevklida. Per. A.Abdurahmanova i B.A.Rosenfelda. - IMI. 26, 1982, 325-329.

al-Naysaburi (No 159)

1. Kitabu'l-Masail fi'l-hilaf bejn al-Basrijjin wa'l-Bagdadijjin. Al-Kalam fi'l Ğawahir. Die atomistische Substanzenlehre aus dem Buch der Streitfragen zwischen Basrensern und Bagdadensern. Ed. und übers. von A.Biram. Leiden, 1902.

Nazif, Mustafa

1. Al-Hasan ibn al-Haytham wa'l-nahiya al-`ilmiyya minhu wa atharuhu al-matbu`a `ala `ilm al-daw. - "al-Jam`iyya al-Misriyya" [1], 1939, 3-20.
2. Ara al-falasifa al-islamiyyin fi'l-haraka wa musahamatihum fi'l-tamhid ila ba`d ma`ani `ilm al-dinamika al-hadith. - "al-Jam`iyya al-Misriyya" [1], 1939, 45-64.
3. Kamal al-Din al-Farisi wa ba`d` bukhuthuhi fi `ilm al-daw. - "al-Jam`iyya al-Misriyya" [1], 1939, 65-100.
4. Ibn al-Haytham ka `alim tabi`i. "al-Jam`iyya al-Misriyya" [1], 1939, 144-150.
5. Al-Hasan ibn al-Haytham, bukhuthuhu wa-kushufuhu al-basariyya. 1-2. al-Qahira, 1362-1363 h. [1942-1943].
6. Ara al-falasifa al-islamiyyin fi'l-haraka (min muhadirat Ibn al-Haytham al-tadhkariyya). al-Qahira, 1363 h. [1943].
7. Kamal al-Din al-Farisi. al-Qahira, 1365 h. [1945].
8. Ibn al-Haitham's Work on Optics. - "Ibn al-Haytham" [1], 1970, 285-293.

Nazif, M. and Ghalioungui, Paul

1. Ibn al-Haitham, an 11th Century Physicist. - ACIHS X (Ithaca, 1962). 1, 1964, 569-570.

Nebbia, Giorgio

1. Ibn al-Haytham nel millesimo anniversario della nascita. - Physis. 9, 1967, No 2, 165-214.
2. Ibn al-Haytam. SeT. 2, 1975, 145.

Nedkov, Boris

1. Bulgariya i sednite zemi prez XII vek spoored geografiyata na Idrisi. Sofiya, 1960.

Neghmatov, Nughman

1. Abu Mahmud Khujandi (Nekotoryye itogi izucheniya nauchnogo naslediya). IAN Taj. SSR. otd. obshch. nauk. 1967, No 4, 17-30.

Nemoy, Leon

1. Arabic Manuscripts in the Yale University Library. - Transactions of the Connecticut Acad. of Arts and Sciences, New Haven. 40, 1956, 1-273.

Netton, Ian Richard

1. Al-Farabi and His School. L. - N.Y. - Routledge, 1952.

Neubauer, Eckhard

1. Neuere Bücher zur arabischen Musik. - Der Islam. 48, 1971, 7-8.
2. Neuerscheinungen zur arabischen Musik. Eine Auswahl an Nachschlagwerken und allgemeinen Darstellungen in europäischen Sprachen. - ZGAIW. 1, 1984, 288-311.
3. Das Musikkapitel des "Ğumal al-falsafa" von Muhammad ibn Ali al-Hindi (1135 n. Chr.). ZGAIW. 4, 1987/88, 51-59.
4. Der Bau der Laute und ihre Besaitung nach arabischen, persischen und türkischen Quellen des 9. bis 15. Jahrhunderten. - ZGAIW. 8, 1993.
5. Die acht "Wege" der arabischen Musiklehre und der Oktoechos. - ZGAIW. 9, 1994.
6. Safi al-Din al-Urmawi. - EI². 8, 1994, 805-807.

Neuenschwander, Erwin A. (b. 1942)

1. Abu Kamil. - LM. 1, 1977, 69.
2. Abu l-Wafa al-Buzağani. - LM. 1. 1977, 69-70.

Neugebauer, Otto (1899-1989)

1. The Astronomy of Maimonides and its Sources. - Hebrew Univ. College Annual. 22, 1949, 321-363; [7], 381-423.
2. The Early History of the Astrolabe. Isis, 40. 1949, 240-256.
3. The Exact Sciences in Antiquity. Providence, 1951, 1957.
4. The Transmission of Planetary Theories in Ancient and Medieval Astronomy. - Scripta Mathematica. 22, 1956, No 3-4, 165-192; [7], 129-156.
5. The Astronomical Tables of al-Khwarizmi. Translation with Commentaries. - Historisk-filosofiske Skrifter udgivet af det Kong. Danske Videnskabernes Selskab. 4, No 2, Köbenhavn, 1962.
6. A History of Ancient Mathematical Astronomy. 1-3. B.-Hb.-N.Y., 1975.
7. Astronomy and History. Selected Essays. N.Y.- B.-Hb.-Tokyo, 1983.
8. The Chronological System of Abu Shaker (A.H. 654). - "From Deferent to Equant [1]. 1987, 299-293.

Neuwirth, Angelika

1. Interpretation of History & Political Expectations in the Philosophy of al-Kindi: Some Notes on his Treatise "Fi kamiyat mulk al-`arab". - ISHAS 2, 1979, Suppl. 99.

Nevskaya, Nina Ivanovna

1. Ob odnoy rukopisi Ibn ash-Shatira. - Voprosy istorii fiz.-mat. nauk, Tambov, 1968, 6-7.

Nevzat, Gözaydın

1. Evliya Celebis Reise in Anatolien von Elbistan nach Sivas im Jahre 1653. Mainz, 1971.

Nicholson, Reynold Alleyne (1868-1945)
1. A Descriptive Catalogue of the Oriental Manuscripts Belonging to the Late E.G. Browne. Cambridge, 1932.

Nicoll, A. and Pusey, E. B.
1. Bibliothecae Bodleianae codicum manuscriptorum orientalium catalogi partis secundae volumen secundus arabicos complectens. Oxoniae, 1821-1835.

Nicomachus (I c. A.D.)
1. Nikomachos von Gerasa. Thabit b. Qurras arabische Ubersetzung der Arithmetike Eisagoge. Herausg. von W.S.J.Kutsch. Beyruth, 1959.

Nix, Ludwig
1. Des fünfte Buch der Conica des Apollonius von Perga in der arabischen Uebersetzung des Thabit ibn Corrah. Herausg., ins Deutsche übertr. und mit einer Einleitung versehen. Lpz., 1889.

Nizami Samarqandi (No 453)
1. Nidhami-I-`Arudi-i-Samarqandi. The Chahar Maqala (Four Discourses). Transl. E.G.Browne. L., 1899; Leiden, 1921.
2. Nizami-i `Arudi-i Samarqandi. Chahar maqala. Persian text, ed. and annotated by Mirza Muhammad ibn `Abd al-Wahhab of Qazwin. Cairo-Leiden, 1910.
3. Nizami-yi `Arudi-yi Samarqandi. Chahar maqala. Ba kushish-i duktur Muhammad Mu`in. Tehran, 1335 s.h. [1957].
4. Nizami Aruzi Samarkandi. Sobraniye redkostey ili chetyre besedy. Per. S.I.Bayevskogo i Z.N.Vorozheykinoy pod red. A.N.Boldyreva. M., 1963.
5. Hikoyoti navodir. - Sadoi Sharq, 1970, No 10, 112-124.

Nizamov, A.
1. Ibn Sina i yego muzykal'no-teoreticheskiye sochineniya. - "Ibn Sina" [11], 1980, 181-190.

Nizamuddin, Muhammad (1899-1968)
1. Al-Biruni and his Scientific Achievements. Hyderabad, 1960.
2. Al-Biruni - a Pioneer Muslim Scientist. - Arshi Presentation Volume. Rampur, 1965, 73-91.

Nolte, Friedrich
1. Die Armillarsphare. - AGNM. 2, 1922.

North, John David (b. 1934)
1. The Astrolabe. L., 1974.
2. Asrtrolabes and the Hour-line Ritual. - JHAS. 5, 1981, 113-114.
3. Coordinates and Categories. The Graphical Representation of Functions in Medieval Astronomy. - "Mathematics and Its Application" [1], 1987, 173-188.

Nosirov, Abdulla
1. Biruniy haqida sharq qulyozma kitoblaridagi materiallar. - "al-Biruni" [3], 1950, 108-124.
2. Biruniy asarlarining ruyhati (fehrasti). - "al-Biruni" [3], 1950, 144-168.
3. Ukazatel' literatury (istochnikov) o zhizni i deyatel'nosti Ulugbeka. - "Iz istorii" [3], 1965, 362-377.

Nosirov, A. and Hikmatullayev, H.
1. Ahmad Farghoniy. Toshkent, 1966.

Noskowyj, Paul Berlin
1. Maqrizii "De valle Hadhramaut" libellus. Diss. phil. Bonn, 1866; "Historical Geography of Arabia" [I], 1993, 55-95.

Nuñez Salacience, Pedro (1502-1578)
1. Petri Nonii de crepusculis liber unus. Item Allaceni de causis crepusculorum liber unus. Lisbonnae, 1542.
2. Petri Nonii de arte atque ratione navigandi libri duo. Cum libello Allaceni de causis crepusculorum. Coimbrae, 1573.
3. Obras. 2. Lisboa, 1943.

Nuraliyev, Yusuf Nuraliyevich

1. Meditsinskiye traktaty Avitsenny. Dushanbe, 1982.

Nurjan `Abd al-Rahim

1. Al-Kindi. Baghdad, 1962.

Nursultanov, Kaji

1. Taghy bir Farabi? - Bilim jane engbek. 1968, No 8, 18-19.
2. At-Taftazani i yego "Traktat ob uglakh treugol'nika". - Voprosy istorii fiz.-mat. nauk. Tambov, 1971, 10-12.

Nurul, Hasan

1. Abu'l-Fadl (Fazl) `Allami. - EI^2. 1, 1954, 117-118.

Nyberg, H. S.

1. al-Nazzam. - EI. 3, 1936, 892-893.
2. Abu'l-Hudhayl al-`Allaf. - EI^2. 1, 1954, 127-129.

Nysanbayev, A. N.

1. Metodologicheskiye problemy matematiki v trudakh al'-Farabi. - "al-Farabi" [4], 1975, 60-63.

Obermann, J.

1. Der philosophische und religiöse Subjektivismus Ghazalis. Wien - Lpz., 1921.

"Ocherki"

1. Ocherki po istorii obshchestvenno-filosofskoy mysli v Uzbekistane. Pod red. I.M.Mu-minova i M.M.Khayrullayeva. Tash., 1977.

O'Leary, De Lacy

1. Arabic Thought and Its Place in History. L., 1922.

Olgun, Ibrahim

1. Beyrûnî'nin kişiye ve topluma bakışı. Al-Biruni's Outlook on Man and Society. - "al-Biruni" [11], 1974, 55-66.

Olimov, K.

1. Ibn-Sina i sufizm. - IAN Taj. SSR, otd. obshch. nauk. 1979, No 2, 59-68.

Olivieri, A.

1. Catalogue Codicorum Astrologorum Graecorum. 1. Codices florentinos. Bruxellis, 1898.

Omar, G.

1. al-Idrisi. -EI^2. 1971, 1032-1035.

Omar, Saleh Beshara

1. Ibn al-Haytham's Optics: a Study of the Origins of Experimental Science. Minneapolis, 1977.
2. Ibn al-Haytham, Galileo, and the Nature of the Lunar Surface. Ibn al-Haytham wa Ghaliliyu wa ṭabi`a saṭh al-qamar. - ISHAS 2, 1979, 71, Suppl. 60.
3. Istiqra `inda Ibn al-Haytham. - JHAS. 5, 1981, 176-190.

Orbeli, Rusudan Rubenovna (b. 1910)

1. "Zij" Ulugbeka na gruzinskom yazyke. - DAN Uzb. SSR. 1971, No 12, 3-4.

Orian, Meir

1. Maimonides: vida, pensamiento y obra. Barcelona, 1984.

Orlova, Natal'ya Vladimirovna

1. Trudy uchonykh srednevekovogo Vostoka po optike. - TNKA XV(f), 1972, 81-86.
2. Bor'ba "fizicheskogo" i "matematicheskogo" ucheniy o svete i zrenii v drevnosti i na srednevekovom Vostoke. - TNKA XVII(f), 1974, 71-79.
3. Ucheniye ob otrazhenii sveta v drevnosti i na srednevekovom Vostoke. ADK (fm). M., 1974.
4. Predstavleniya o prirode zreniya v drevney Gretsii i na srednevekovom Vostoke. - VIYT. 49, 1975, 53-56.

5. Teoriya otrazheniya sveta v opticheskikh traktatakh Ibn al-Haysama. - TNKA XVIII(f), 1975, 4-16.
6. Istoriya otkrytiya zakona otrazheniya sveta. - TNKA XX(f), 1978, 74-81.

Ostrogorsky, Georg [Ostrogorski, Georgije] (1902-1976)

1. Zum Reisebericht des Harun-ibn-Jahja. - Seminarium Kondakovianum. Recueil d'Etudes Archéologie. Histoire de l'Art. Etudes Byzantines (Praha). 5, 1932, 251-257; "Studies of the Travel Accounts, F.M., 1994. 133-139.

Oudet, Jean-François

1. A la recherche de l'observatoire d'al-Khujandi à Rayy. - ACIHS XX, 1997,61.

Palmer, Edward Henry

1. Descriptive Catalogue of the Arabic etc. Manuscripts in the Library of King's College. - JRAS (N.S.). 3, 1868, 105-131.
2. Descriptive Catalogue of the Arabic, Persian and Turkish Manuscripts in the Library of Trinity College. Cambridge, 1870.

Papazyan, Artashes Davidovich

1. Ob odnoy pukopisi "Knigi spaseniya" Abu-Ali ibn Sina. - DAN Arm. SSR, 23, 1956, No 5, 229-234.

Papazyan, Avetis Ambartsumovich

1. "Jihan-nyuma" i "Fezleke" Kyatiba Chelebi kak Istochnik po istorii Armenii. Yerevan, 1973.

Parès, Nicolas

1. Le calcul du maximum et la "derivée" selon Sharaf al-Din al-Tusi. - ASP, 5, 1995, No 2, 219-238.
2. Aspects analytiquesdans la mathématique de Sharaf al-Din al-Tusi. - Historiascientiarum. (2) 5, 1995, No 1, 39-55.

Paret, R.

1. An-Nazzam als Experimentator. - Der Islam. 25, 1939, 238-243.

Parizi, Bastani

1. Rahi wa dil-i Khwarizmi. - "al-Khorezmi" [3], 1984, 47-53.

Pashayev, Z. A.

1. Kommentariy Kazi-zade ar-Rumi k astronomicheskomu traktatu Chagmini. - TSGU. 202, 1972, 202-204.
2. Ob astronomicheskom traktate Chagmini. - TSGU. 229, 1972, 24-26.

Pearson, J. D.

1. Oriental Manuscript Collections in the Libraries of Great Britain and Ireland. L., 1954.
2. Index Islamicus 1906-1955. Cambridge, 1958.
3. Index Iislamicus. Supplement 1956-1960. Cambridge, 1962.
4. Oriental Manuscripts in Europe and North America. A Survey. L., 1971.

Pedersen, J.

1. Ibn Duraid. - EI. 2, 1927, 374-375.

Pedersen, Olaf (b. 1920)

1. New Notes on Sundials. - "From Deferent to Equant" [1], 1987, 295-311.

Pellat, Charles

1. Le milieu basrien et la formation de Ğahiz. P., 1953.
2. Anwa'. - EI². 1, 1954, 523-524.
3. Le traité d'astronomie pratique et de météorologie populaire d'Ibn Quteyba. - Arabica. 1, 1954, 84-88.
4. Le Kitab al-tarbi' wa-l-tadwir de Ğahiz. Texte arabe, introduction, glossaire. Damas, 1955.
5. Al-Djahiz. - EI². 2, 1962, 385-386.
5a. al-Djayhani. - EI². Suppl., 1982, 265-266.,,
6. Hisab al-Akd. - EI². 3, 1967, 466-468.
7. The Life and Works of Jahiz. L., 1969.
8. L'astrolabe sphérique d'ar-Rudani. - Bull. d'Etudes Orientales. 28,mamsed 1977, 83-165.

Périer, Augustin

1. Jahjâ ben `Adî, un philosophe Arabe chrétien du X^e siècle. Thèse. P., 1920.

Perlmann, Moshe

1. Introduction. - al-Samaw'al [4], 1964, 15-32.
2. Samau'al ben Judah. - EJ. 14, 1976, 760-761.

Pertsch, Wilhelm

1. Die persischen Handschriften der Herzoglichen Bibliothek zu Gotha. Wien, 1859.
2. Die türkischen Handschriften der Herzoglichen Bibliothek zu Gotha. Wien, 1864.
3. Die arabischen Handschriften der Herzoglichen Bibliothek zu Gotha. Gotha, 1878-1892; "Handschriften" [2], 1987.
4. Verzeichniss der persischen Handschriften der königlichen Bibliothek zu Berlin (Die Handschriften - Verzeichnisse der königlichen Bibliothek zu Berlin, 4). B., 1888.
5. Verzeichniss der türkischen Handschriften der königlichen Bibliothek zu Berlin (Die Handschriften - Verzeichnisse der königlichen Bibliothek zu Berlin, 6). B., 1889.

Peters, C. H. F.

1. Uber Ulugh Begs Sterngrössen. - Astronomische Nachrichten. 99, 1881, 235-237.

Peters, Francis E.

1. Science, History and Religion: Some Reflections on the India of Abu Raihan al-Biruni. - "al-Biruni" [9], 1979, 233-242.

Petraček, K.

1. Handschriftliches aus der Nationalbibliothek in Prag. Vorläufiger Bericht über einige arabische Handschriften. - Archiv Orientalni. 25, 1957, 611-627.
2. Arabische Handschriftenin der Bibliotheca Strahoviensis (Pamatnik Narodniho Pi-semstvi) in Prag. - Archiv Orientalni. 28, 1960, 467-469.

Petraček, K., Blaškovič, J., and Vesely, R.

1. Arabische, türkische und persische Handschriften der Universitatsbibliothek in Bratsilava, 1961.

Petri, Winfried (b. 1914)

1. Mekka und Meridian - ein Mißverstandnis bei al-Biruni. - "Prismata" [1], 1977, 363-364.

Petrov, Boris Dmitriyevich

1. Ibn Sina - tvorets "Kanona". - Ibn Sina [24], I, 1954, X-XI.
2. Ibn Sina. Tash., 1976.
3. Ibn Sina (Avitsenna). 980-1037. M., 1980.
4. Ibn Sina - velikiy sredneaziatskiy entsiklopedist. - Ibn Sina [65]. I, 1981, 14-127.

Pines, Shlomo [Solomon] (1908-1990)

1. Beiträge zur islamischen Atomenlehre. Inauguraldissertation. B., 1936; N.Y., 1987.
2. Al-Razi. EI. 3, 1936, 1225-1227.
3. Les précurseurs musulmans de la théorie de l'impetus. - Archeion, 21, 1938, 294-306; [31], 409-417.
4. Etudes sur Awhad al-Zaman Abu'l-Barakat al-Baghdadi. - Revue des études juives. 103, 1938, 4-64, 104, 1938, 1-34; [26], 1-96.
5. Madhhab al-Dharra `inda'l-muslimin wa `alaqa fihi bi-madhahib al-yunan. Nashara Abu Rida. al-Qahira, 1946.
6. Un précurseur Bagdadien de la théorie de l'impetus. - Isis. 44, 1953, 247-251; [31], 418-422.
7. Abu'l-Barakat. - EI². I, 1954, 111-113.
8. La conception de la conscience de soi chez Avicenne et Abu'l-Barakat al-Baghdadi. - Archives d'histoire doctrinale et littéraire du moyen âge. 29, 1954, 21-99; [26], 181-258.
9. Razi critique de Galien. - ACIHS VII (Jerusalem, 1953). P., 1955, 480-487.
10. Nouvelles études sur Awhad al-Zaman Abu'l-Barakat al-Baghdadi. Mémoires de la Société des Etudes Juives. 1, P., 1955; [26], 96-173.
11. La théorie de la rotation de la terre à l'époque d'al-Biruni. - JA. 244, 1956, 301-302; [31], 430-435.
12. Studies in Abu'l-Barakat al-Baghdadi's Poetics and Metaphysics. - Scripta Hierosalymitana. 6, 1960, 120-198; [26], 259-334.
13. What Was Original in Arabic Science. - "Scientific Change", 1963, 181-205; [31], 329-353.

14. La dynamique d'Ibn Bajja. - Mélanges Alexandre Koyre. I.L'aventure de la science. P., 1964, 442-468; [31], 440-468.
15. Ibn al-Haytham's critique of Ptolemy. - ACIHS X (Ithaca, 1962). P., 1964, 547-550; [31], 436-439.
16. Al-Biruni's Arabic Version of Patanµ-jali's Yogasutra: A Translation and Comparison with Related Sanskrit Texts. - Bull. of the School of Oriental and African Studies. 29, 1966, 302-325; 40, 1977, 522-549; 46, 1983, 258-304; 51, 1988.
17. Maimonides. - The Encyclopedia of Philosophy. 5, 1967, 187-217.
18. Thabit b. Qurra's Conception of Number and Theory of the Mathematical Infinite. - ACIHS XI (Wroclaw - Varsovie - Cracovie, 1965), 3, 1968, 160-166; [31], 423-429.
19. Ibn Bajja. - EI². 3, 1970, 408-409.
20. Abu'l-Barakat al-Baghdadi. - DSB. 1, 1970, 26-28.
21. Ibn Khaldun and Maimonides. A Comparison between Two Texts. - Studia Islamica. 32, 1970, 265-274.
22. La place faite aux mathématiques dans la philosophie du moyen âge. - ACIHS XIII (M., 1971), 3-4, 1974, 163-174; [31], 375-386.
23. Philosophy, Mathematics and the Concepts of Space in the Middle Ages. - "The Interaction between Science and Philosophy", ed. Y.Elkana, Atlantic Highlands, NJ. 1974, 165-174; [31], 359-374.
24. Maimonides, Rabbi Moshe ben Maimon. - DSB. 9, 1974, 27-32.
25. Al-Razi, Abu Bakr Muhammad ibn Zakariyya. - DSB. 11, 1975, 323-326.
26. Studies in Abu'l-Barakat al-Baghdadi. Physics and Metaphysics. - Collected Works, 1. Jerusalem - Leiden, , 1979.
27. Note on Abu'l-Barakât's Celestial Physics. - [26], 175-180.
28. Yahya ibn `Adi's Refutation of the Doctrine of Acquisition (Iktisab) [Edition, Translation, and Notes on Some of His Other Treatises]. - Studia Orientalia Memoriae D.H.Baneth Dedicata. Jerusalem, 1979, 49-94.
29. Maimonide et la philosophie latine. - Actas del V. Congreso Internacional de Filosofia Medieval [1972]. Madrid, 1979, 219-229.
30. Une encyclopédie arabe du dixième siècle: les epîtres des frères de la pureté, Rasail Ikhwan al-Safa'. - Revista di Storia della filosofia. 40, 1985, 131-137.
31. Studies in Arabic Versions of Greek Texts and in Mediaeval Science. - Collected Works, 2. Jerusalem - Leiden, 1986.

Pines, Shlomo and Suler, Bernard

1. Avicenna (Ibn Sina). - EJ. 3, 1972, 955-960.

Pines, Shlomo, Suler, Bernard, and Munther, Suessmann

1. Avierroes (Ibn Rushd). - EJ. 3, 1972, 949-953.

Pingree, David (b. 1933)

1. Astronomy and Astrology in India and Iran. - Isis. 54, 1963, 229-246.
2. Indian Influence on Early Sasanian and Arabic Astronomy. - J. for Oriental Research of Madras, 33, 1963-1964, 1-8.
3. The Persian "Observation" of the Solar Apogee in ca. 450. - JNES, 24, 1965, 336.
4. The Thousands of Abu Ma`shar. - Studies of the Warburg Institute. 30, 1968, 1-18.
5. The Fragments of the Works of Ya`qub ibn Tariq. - JNES. 27, 1968, No 2, 97-125.
6. Sanskrit Astronomical Tables in the United States. - Transactions of the Amer. Philos. Society. 58, 1968, No 3, 1-77.
7. Census of the Exact Sciences in Sanskrit. Series A. 1-4. - Memoirs of the Amer. Philos. Society. 81, 1970, 85, 1971, 111, 1976, XX 1991.
8. The Fragments of the Works of al-Fazari. - JNES. 29, 1970, No 2, 103-123.
9. Abu Ma`shar al-Balkhi. - DSB. 1, 1970, 32-39.
10. Ibn Abi'l-Ridjal. - EI². 3, 1967, 688.
11. Ibn al-Samh. - EI². 3, 1967, 928-929.
12. Al-Farisi. - DSB. 4, 1971, 555-556
13. Ibn Hibinta. - DSB. 6, 1972, 381.
14. Jayasimha. - DSB. 7, 1973. 80-82.
15. The Greek Influence on Early Islamic Mathematical Astronomy. - JAOS. 93, 1973, 32-43.
16. Masha'allah. - DSB. 9, 1974, 159-162.
17. al-Qabisi. - DSB. 11, 1975, 226.
18. Masha' Allah: Some Sasanian and Syrian Sources. - Haurani [2], 1975, 5-14.
19. `Umar ibn Farrukhan al-Tabari. - DSB. 13, 1976, 538-539.
20. Ya`qub ibn Tariq. - DSB. 14, 1976, 546.

21. The "Liber Universus of `Umar Ibn al-Farrukhan al-Tabari". - JHAS. 1, 1977. No 1, 8-12.
22. History of Mathematical Astronomy in India. - DSB. 15, 1978, 533-633.
23. Islamic Astronomy in Sanskrit. - JHAS. 2, 1978, No 2, 315-330.
24. al-Kabisi. - EI^2. 4, 1978, 340-341.
25. Kamal al-Din al-Farisi. - EI^2. 4, 1978, 515.
25a. Al-Khwarizmi in Samaria. - AIHS. 33, 1983, No 110, 15-21.
26. Brahmagupta, Balabhadra, Prthudaka, and al-Biruni. - JAOS. 103, 1983, 353-360.
27. `Abd al-`Ali Birjandi. - EIr. 1, 1983, 90.
28. `Abd al-Hamid b. Vase' b. Tork. - EIr. 1, 1985, 111.
29. `Abd al-Malek Širazi. - EIr. 1, 1983, 121.
30. `Abd al-Mon`em `Ameli. - EIr. 1, 1985, 130.
31. `Abd al-Qader Ruyani. - EIr. 1, 1985, 134.
32. `Abd al-Rahim al-`Ajami. - EIr. 1, 1983, 140.
33. `Abd al-Vahed. - EIr. 1, 1985, 167.
34. `Abd al-Vahed Juzjani. - EIr. 1, 1983, 168.
35. `Abdallah b. Šaker. - EIr. 1, 1985, 185-186.
36. `Abdallah al-Kabri. - EIr. 1, 1985, 197.
37. Abhari Amin-al-Din. - EIr. 1, 1985, 216.
38. Abu'l-`Anbas al-Saymari. - EIr. 1, 1985, 259.
39. Abu'l-Fath al-Esfahani. - EIr. 1, 1985, 284-285.
40. Abu'l-Hasan Ahwazi. - EIr. 1, 1985, 302.
41. Abu'l-Hasan Heravi. - EIr. 1, 1985, 305.
42. Abu Ja`far b. Ahmad. - EIr. 1, 1985, 326.
43. Abu Ja`far al-Kazen. - EIr. 1, 1985, 326-327.
44. Abu Mansur Tusi. - EIr. 1, 1985, 337.
45. Abu Ma`šar Balki. EIr. 1, 1985, 337-380.
46. Abu Nasr Mansur b. `Iraq. - EIr. 1, 1985, 351-352.
47. Abu'l-Qasem Kermani. - EIr. 1, 1985, 363.
48. Abu Sahl b. Nawbakt. EIr. 1, 1985, 369.
49. Abu Sahl Vijan Kuhi. - EIr. 1, 1985, 370-371.
50. Abu'l-Wafa b. Sa`id. - EIr. 1, 1985, 392.
51. Abu'l-Wafa Buzjani. - EIr. 1, 1985, 392-394.
52. Ahmad Heravi. - EIr. 1, 1985, 647.
53. Ahmad Nehavandi. - EIr. 1, 1985, 653.
54. Ahmad Sağani. - EIr. 1, 1985, 654.
55. Ahvazi. - EIr. 1, 1985, 691.
56. `Ali b. Ahmad Balki. - EIr. 1, 1985, 848.
57. `Ali Qa`eni. - EIr. 1. 1985. 870-871.
58. `Ališah al-Bokari. - EIr. 1, 1985, 887.
59. The Astronomical Works of Gregory Chioniades. 1. The Zij al-`Ala'i. Part 1. Text, translations, commentary. Amsterdam, 1985. Part 2. Tables. Amsterdam, 1986.
60. Indian and Islamic Astronomy at Jayasimha's Court. - "From Deferent to Equant" [1], 1987, 313-328.
61. Asfezari. - EIr. 2, 1987, 748-749.
62. al-Atar al-baqia. - EIr. 2, 1987, 906-909.
63. Astorlab. - EIr. 2, 1987, 853-857.
64. `Ata' Samarqandi. - EIr. 2, 1987, 878.
65. Baha al-Din Karaqi. - EIr. 3, 1988, 431.
66. Banu Amajur. - EIr. 3, 1988, 715-716.
67. Banu Monajjem. - EIr. 3, 1988, 416.
68. Banu Musa. - EIr. 3, 1988, 316-317.
69. Indian Astronomy in Medieval Spain. - "From Baghdad to Barcelona" [1]. I, 1996, 39-48.

Piri Reis (No 969)

1. Kitab Bahriye. Ed. Şerefettin Yaltkaya. Istanbul, 1935.

Piriyev, V. Z.

1. Hamdullah Mustovfi Qazvini (Yeni va ma'lum faktlar asasinda hayat va yaradyjylyghy). - IAN Azerb. SSR, ser. ist., filos. i prava. 1974. No 8. 32-38.

Plessner, Martin

1. Al-Kutubi. - EI. 2, 1927, 1258.
2. Beiträge zur islamischen Literaturgeschichte. I. Studien zu arabischen Handschriften aus Stambul, Konia und Damaskus. - Islamica, 4, 1931, 525-561; "Handschriften" [2] I. 1986, 749-785.
3. Al-Maridini. - EI. 3, 1934, 318-319.
3a. Der Astronom und Historiker Ibn Sa`id al-Andalusi und seine Geschichte der Wissenschaften. - Rivista degli studî orientali. 31, 1956, 235-257.
4. Storia delle science nell'Islam. - La civilta dell'Oriente. 3. Roma, 1958, 449-492.
5. Dâwûd Al-Antâkî's 16[th] Century Encyclopaedia on Medicine, Natural History and Occult Sciences. - ACIHS X (Ithaca, 1962), 1964, 635-637.
6. On Da'ud al-Antaki's Medical and Magical Encyclopaedia and Some of Its Sources. - Eretz - Israel. 7. Jerusalem, 1964, 138-140.
7. Baylak al-Qipjaqi. - DSB. 1, 1969, 532-533.
8. Jabir ibn Hayyan. - DSB. 7, 1973, 39-43.
9. al-Jahiz. DSB. 7, 1973, 63-65.

Plessner, M. and Klein-Franke, F.

1. al-Tifashi. - DSB. 13, 1976, 407-408.

Plessner, M. and Samso, J.

1. al-Maridini. - EI². 6, 1990, 542-543.

Plooij, E. B.

1. Euclid's Conception of Ratio and his Definition of Proportional Magnitudes as criticized by Arabian Commentators. Rotterdam, 1950.

Pogrebysskiy, Yosif Benediktovich (1906-1971) and Bogolyubov, Aleksey Nikolayevich (b. 1913)

1. Razvitiye matematiki i matematicheskikh znaniy v Zakavkaz'ye. - Istoriya otechestvennoy matematiki. I. S drevneyshikh vremyon do kontsa XVIII v. Kiyev, 1966, 420-449.

Polosin, Vitaliy Vyacheslavovich

1. K voprosy o dvukh redaktsiyakh "Fihrista' Ibn al-Nadima. - Pis'mennyye pamyatniki i problemy istorii kul'tury narodov Vostoka. M., 1978, 113-118.
2. Istoriko-kul'turnyy smysl rasskaza Ibn al-Nadima ob indiyskom pis'me (Indiyskikh tsifrakh). - Vsesoyuznaya konf. po problemam arabskoy kul'tury pamyati akademika I.Yu.Kra-chkovskogo. Tezisy dokladov i soobshcheniy. M., 1983, 39-41.
3. "Fihrist" Ibn al-Nadima kak istoriko-kul'turnyy pamyatnik X v. - ADK(i), Lg., 1984.
4. Fitali Bulusin. Malakhazat hawl "Fihrist" Ibn al-Nadim. - AJ. I, 1986, 124-163.

Pope, A. U.

1. Alberuni as a Thinker. - "al-Biruni" [4], 1951, 281-285.

Poper, S.

1. Behmenjar ben al-Marzuban, der persische Aristoteliker aus Avicenna's Schule. Zwei metaphysische Abhandlungen von ihm. Arabisch und Deutsch mit Anmerkungen. Lpz., 1851.

Poulle, E.

1. L'astrolabe médiéval d'après les manuscrits de la Bibliothèque Nationale. - Bibl. de l'Ecole des Chartes. 112, 1954, 81-103.

Prasad, Kali

1. Catalogue of Oriental Manuscripts in the Lucknow University Library. Lucknow, 1951.

Pretzl, Otto (1893-1941)

1. Die frühislamische Atomenlehre. - Der Islam. 19, 1931, 117-130.

Price, Derek John de Solla (1922-1983)

1. On the Origin of Clockwork, Perpetual Motion Devices and the Compass. - Contributions from the Museum of History and Technology. 6. Wash., 1959, 81-112.
2. Mechanical Water Clocks of the 14[th] Century in Fez, Morocco. - ACIHS X (Ithaca, 1962), 1964, 599-602.
3. Astronomy's Past Preserved at Jaipur. - Natural History. 73, 1964, No 6, 49-53.

Prinsep, James and de Saussure, Leopold

1. Astronomie nautique arabe. P., 1928.

"Prismata"

1. Prismata. Naturwissenschaftsgeschichtliche Studien. Festschrift für Willy Hartner, herausg. von Y.Maeyama und W.G.Saltzer. Wiesbaden, 1977.

Prüfer, C. and Meyerhof, M.

1. Die aristotelische Lehre vom Licht bei Hunain b. Ishâk. - Der Islam. 2, 1911, 117-128.

Ptolemy [Ptolemaeus] (2nd c. A.D.)

1. Claudii Ptolemaei Quadripartitum. Venetiae, 1493.
2. Ptolemaus. Handbuch der Astronomie. Deutsche Ubersetzung und erläuternde Anmerkungen von K.Manitius. Vorwort und Berichtigungen von O.Neugebauer. 1-2. Lpz., 1963.
3. Ptolemy's Almagest. Transl. G.J.Toomer. L., 1984.

"Publications"

1. Publications 1984 - Summer 1995. Institut für Geschichte der arabisch-islamischen Wissenschaften an der Johann Wolfgang Goethe-Universität. F. M., 1995.

Puig, Josep

1. Maimonides and Averroes on the First Mover. - "Maimonides" [2], 1986, 213-223.

Puig, Roser (b. 1957)

1. Ibn Arqam al-Numayri (m. 1259) y la introduccion en al-Andalus del astrolabio lineal. - "Textos y Estudios", 1983, 101-103.
2. Ciencia y técnica en la Ihata de Ibn al-Jatib. Siglos XIII y XIY. - Dynamis. 4. 1984, 65-79.
3. Concerning the Safiha Shakkaziyya. - ZGAIW. 2, 1985, 123-139.
4. Los tratados de construccion y uso de la Azafea de Azarquiel. Madrid, 1988.
5. A Geometric Device Used by al-Zarqalluh for the Computation of Lunar Parallax. - ACIHS XVIII, 1989, P2, 14.
6. On the Eastern Sources of Ibn al-Zarqalluh's Orthographic Projection. - "From Baghdad to Barcelona" [1]. II, 1996, 737-753.
7. The Theory of the Moon in al-Zij al-Kamil fi'l-Ta'alim of Ibn al-Haim. - ACIHA XX, 1997, 27.

al-Qabisi (No 205)

1. Alchabitii Abdilari liber introductorius ad magisterium judiciorum interprete Joanne Hispalensi. Venetiae, 1481, 1482, 1485, 1491, 1511, 1521.
2. Tractatus notabilis Alchabitii de conjuctionibus planetarum in diodecim signis et earum pronosticis in revolutionibus annorum. Venetiae, 1485, 1511, 1521.
3. Alcabitius. Traité de conjonctions de planètes. Trad. O. Finé. P., 1557.

al-Qadi, Wadad

1. Kitab Siwan al-hikma: structure, composition, authorship and sources. - Der Islam. 58, 1981, No 1, 87-124.

Qadyrov [Qodirov], Abdulqayum Qadyrovich

1. Teoriya i praktika razdela naslestva kak odin iz istochnikov razvitiya matematicheskogo obrazovaniya na Srednem Vostoke. - Voprosy istorii i metodiki elementarnoy mate-matiki. 3. Dushanbe, 1967, 33-40; ADK (p). Dushanbe, 1968.
2. Usuli halli muodilahoi nomuayyani dar kori Al-Sajovandi. - Maktabi soveti. 1968, No 12, 29-33.

Qadyrov [Qodirov], Asadulla Abdulla ughli

1. Abu Ali ibn Sino. Toshkent, 1953.
2. Genial'nyy vrach srednevekov'ya (k 1100-letiyu so dnya rozhdeniya Abu Bakra Razi). - Med. Zhurnal Uzbekistana. 1965, No 9, 72-75.
3. Abu Bakr Razi - odin iz sozdateley pervykh bol'nits. - Med. Zhurnal Uzbekistana. 1968, No 2, 38-40.

Qadyrov, A. A. and Saipov, Usman Talip ughli

1. Abubakir Roziy. Toshkent, 1963.
2. Abu Bakr Razi. Tash., 1963.
3. Velikiy sredneaziatskiy uchonyy-medik Abu Ali ibn Sina. Tash., 1980.

Qadyrov, Muhammedjan

1. Jurjani i yego logicheskiye traktaty. - ONU. 1976, No 6, 49-52.
2. Filosofskiye vozzreniya Jurjani. - "Ocherki" [1], 1977, 192-199.

Qahhorov, A. and Khojiyev, I.

1. Ob astronomicheskikh i matematicheskikh rukorisyakh, khranyashchikhsya v Gosudarstvennoy Respublikanskoy Biblioteke. - IAN Taj. SSR, otd. fiz.-mat. i geol.-khim. nauk. 1977, No 1, 23-30.

"al-Qaima al-jadida"

1. Al-Qaima al-jadida li'l-matbu`at al-`arabiyya wa'l-nashriyyat al-`ilmiyya bi-Daira al-Ma`arif al-`Uthmaniyya. Haydarabad, 1374 h. [1955].

al-Qalasadi (No 865)

1. Aboul Haçan Ali b. Moh. Alkalçadi. Traité d'arithmétique. Trad. par F.Woepcke. - Atti dell' Accad. Pontificia de' Nuovi Lincei. 12, 1859; Woepcke [18], 1986, II, 1-46.
2. Kashf al-asrar `an `ilm huruf al-ghubar. Fas, 1310 h. [1892-1893].

Qalyubi (No 1134)

1. Qalyûbî. The Book of Anecdotes, Wonders, Marvels, Pleasanteries, Rarities and Useful and Precious Extracts, ed. by W.Nassau Lees and Mawlawi Kabir al-Din. Calcutta, 1856, 1864.
2. Hikayat wa gharaib wa `ajaib wa lataif wa nawadir wa fawaid wa nafais. al-Qahira, 1274 h. [1858], 1277 h. [1860], 1282 h. [1865], 1287 h. [1870], 1296 h. [1879], 1297 h. [1880], 1300 h. [1883], 1302 h. [1885], 1304 h. [1887], 1307 h. [1890], 1308 h. [1891], 1311 h. [1894], 1323 h. [1905], 1328 h. [1910].
3. Nawâdir. Cownpore, 1300 h. [1883], 1330 h. [1912]; Lucknow, 1317 h. [1899].

Qaqshal (No 1185)

1. `Uqul `ashara. Bombay, 1318 h. [1900].

al-Qarabaghi (No 1088)

1. Traktat o sokrytom. Per. A.A.Semyonova. - Izv. Obshchestva dlya izucheniya Tajikistana i iranskih narodnostey za yego predelami. I, Tash., 1928, 147-183.

Qarryyev [Garryyev] Aba Atali oghli

1. Ebjet hasaby. Ashghabat, 1968.

Qary-Niyazov, Tashmuhammed Niyaz ughli (1897-1970)

1. Observatoriya Ulugbeka v svete novykh dannykh. - Trudy nauchnoy sessii AN Uz. SSR. Tash., 1947.
2. Astronomicheskaya shkola Ulugbeka. M.-Lg., 1950; Izbrannye trudy. 6. Tash., 1967.
3. Velikiy uchonyy i myslitel'. - Ibn Sina [5], 1953, 30-37.
4. O nekotorykh rezul'tatakh, poluchennykh observatoriey Ulugbeka. - Trudy XXV Mezhdunar. kongressa vostokovedov (M., 1960). 3. M., 1963, 47-54.
5. Ulugbek - velikiy astronom XV v. - "Iz istorii" [1], 1965, 67-99.
6. Ulugbek i Savoy Jay Singh. - FMSV. I, 1966, 247-256.
7. T.N.Qori-Niyoziy. Ulughbek wa uning ilmiy merosi. Toshent, 1971.
8. Ulugh Beg. - DSB. 13, 1976, 535-537.

Qasimova, El'mira Huseyn qyzy

1. Novyye materialy po istorii sfericheskoy geometrii na srednevekovom Vostoke. - Materialy nauchnoy konf. aspirantov AN Az. SSR, 1971. Fiz.-tekh. i mat. nauki. Baku, 1973, 45-50.
2. Traktat Beruni o sfericheskoy trigonometrii. - "al-Biruni" [7], 1973, 81-84.
3. Istoriya teoremy sinusov i resheniya sfericheskikh treugol'nikov na srednevekovom Vostoke. ADK (fm). Baku, 1974.

Qasumi, Sharif Hussain

1. Tansukh-nameh-i Ilkhani - a Unique Persian Work on Gemology. - SHMS. 9, 1985, No 1-2, 67-74.

Qasumkhanov, Fatali Agha Rza oghlu (1905-1965)

1. Teoriya nepreryvnykh velichin i rasshireniye ponyatiya o chisle v rabotakh (azer-bayjanskogo uchonogo XIII veka) Muhammeda Nasireddina Tusi. - TIIYT. I, 1954, 128-142; ADK (fm). M., 1956.

Qasumov [Gasymov], Mehbaly Mammad oghlu (1906-1963)
1. Omar Khajjamyn rubailarda ateizm motivlari. Baky, 1959.

Qasymjanov, Agyn Khayrulla uly
1. Al'-Farabi. Alma-Ata, 1974.
2. Logika i teoriya poznaniya al'-Farabi. - al-Farabi [23], 1975, 7-98.
3. Velikiy myslitel' iz Otrara. - al-Farabi [24], 1975, V-XII.
4. Al-Farabi - velikiy sotsial'nyy myslitel'. - "al-Farabi" [2], 1975, 115-127.
5. The problem of scientific methods: al-Farabi and Roger Bacon. - ACIHS XV (Edinburgh, 1977), 1977, 28.

Qasymjanov, A. H. and Qurmanghaliyeva, T. K.
1. O "Bol'shoy knige muzyki" al'-Farabi. - "al-Farabi" [2], 136-144.

Qasymjanov, A. H., Lukonin, R. K. and Kharenko, Ye. D.
1. Velikiy myslitel' Vostoka. Alma-Ata, 1975.

Qasymjanov, A. H. and Kharenko, Ye. D.
1. Nekotoryye poyasneniya k tekstu. - al-Farabi [19], 1973, 350-369.
2. Tekstke keybir tüsindirmeler. - al-Farabi [22], 1975, 373-394.

Qazembek, Mirza Aleksandr Qasimovich (1802-1870)
1. Vvedeniye. - al-Bukhari [1], 1845, 1-92.

al-Qazwini (No 624)
1. Zakariyâ b. Muhammad b. Mahmûd al-Qazwînî. Kosmographie. 1. Kitâb ağâ'ib el-machlûqât. Die Wunder der Schöpfung. 2. Kitâb â'târ el-bilâd. Die Denkmaler der Lander. Herausg. von F.Wüstenfeld. Göttingen, 1848-1849; re-ed. by Fuat Sezgin, F. M., 1994.
2. Kitab 'ajaib al-makhluqat wa gharaib al-mawjudat. Tehran, 1264 h. [1848]; Lucknow, 1266 h. [1850].
3. Zakarijâ ben Muhammad ben Mahmûd el Qazwînî's Kosmographie. Die Wunder der Schöpfung. 1. Halbband. Ubers. von H. Ethé. Lpz., 1868; re-ed. by Fuat Sezgin. F.M., 1994.

al-Qazwini (No 708)
1. Nuzha al-qulub. Bombay, 1311 h. [1894].
2. The Ta'rikh-i-guzida or "Select History" of Hamdu Llah Mustawfi-i-Qazwini. Transl. by E.G.Browne. 1-2. Leiden - L., 1913.
3. Hamd-Allah Mustawfi of Qazwin. The geographical part of the Nuzhat-al-Qulub. Ed. by G. Le Strange. Leiden - L., 1915, 1919; re-ed. by Fuat Sezgin, F.M., 1993.
4. The zoological section of the Nuzhatu-l-qulub of Hamdullah al-Mustaufi al-Qazwini. transl. and annot. by J.Stephenson, L., 1928.
5. Nuzha al-kulub. Svedeniya ob Azerbayjane. Per. Z.M.Buniatova, P.K.Juze i I.V.Petrushevskogo. Baku, 1983.

Qodirov, A.
1. Afkori astronomi Muhammad Zakii Ghaznavi. - Maktabi soveti. 1972, No 11, 23-32.

Quadri, Goffredo
1. La filosofia degli Arabi nel suo fiore, 1-2, Firenze, 1939.
2. La philosophie arabe dans l'Europe médiévale des origines à Averroes. Trad. par R.Huret. P., 1947; 1960.

"Quest for Understanding"
1. Quest for Understanding: Arabic and Islamic Studies in Memory of Malcolm H.Kerr. Ed. S.Seykaly, R.Baalbaki, and P.Dodd. Beyrut, 1991.

Quds, Obaidulla
1. Al-Biruni's Methodology and Its Sources. - "al-Biruni" [9], 1979, 594-904.

al-Quduqi (No 1277)
1. Hashiya 'ala'l-Charpardi. Istanbul, 1303 h. [1886].

Quliyeva, Güllü Zeynal kyzy

1. Materialisticheskiye tendentsii v opredelenii osnovnykh ponyatiy geometrii u matematikov srednevekovogo Vostoka v 9-11-kh v. - Uch. zap. Azerb. gos. universiteta, ser. fiz.-mat. i khim. nauk. 1962, No 4, 19-23.
2. Teoriya sostavnykh otnosheniy Ibn al-Haysama. - Uch. zap. Azerb. gos. universiteta, ser. fiz.-mat. i khim. nauk. 1963, No 4, 85-90.
3. Osnovnyye ponyatiya matematiki u predshestvennikov Nasireddina Tusi. ADK (fm). Baku.

Qulmuradov, Umbar

1. Farabi o chuvstvennom poznanii. - ONU. No 6, 1973, 63-54.
2. Beruni o poznanii mira. - ONU. No 7-8, 1973, 82-84.

Qumayr, Yuhanna

1. Falasifa al-`arab. 1-9. Beirut, 1950-1954.

Quraishi, M. F.

1. How to Determine the Side of a Regular Heptagon Inscribed in a Circle. - "Ibn al-Haytham" [1], 1970, 135-145.

Qurbani, Abu'l-Qasim

1. Riyadidanan-i irani az Khwarizmi ta Ibn Sina. Tehran, 1350 s.h. [1971].
2. Kashani-nama, tahqiq dar ahwal wa athar-i Ghiyath al-Din Jamshid Kashani riyadisan wa munajjim-i buzurg-i Iran. Tehran, 1350 s.h. [1972].
3. Abu'l-Hasan ibn Bamshad al-Qaini. - Yakan. 2, 1350 s.h. [1972], 322-324.
4. Nasawi-nama, tahqiq dar athar-i riyadi-yi `Ali ibn Ahmad Nasawi. Tehran, 1351 s.h. [1973].
5. Biruni-nama. Tehran, 1353 s.h. [1974].

Qurbani, Abulqasem [Abu'l-Qasim] and Hamadanizadeh, Jawad

1. A Short History of Mathematics in Iran from Ninth to Seventeenth Centuries. Tehran, 1973.

Qureshi, F. D.

1. The Keys to the Knowledge of Spherical Astronomy by Al-Biruni. - International Congress of Mathematical Sciences. Karachi, 1975.

al-Qurtubi (No 249)

1. Tabari continuatus. Ed. M.J.de Goeje. Lugduno-Batavorum, 1897.

al-Qushji (No 845)

1. al-Risala al-fathiyya. Istanbul, 1239 h. [1824].
2. Risala dar hay'at. Dihli, 1291 h. [1874].
3. Astronomiya oid risola. I.M.Muminov tomonidan tahrir etilgan va supz boshi, kirish maqola yozilgan. Toshkent, 1968.
4. Astronomicheskiy traktat. Per. A.U.Usmanova. Samarkand, 1970.
5. Arifmeticheskiy traktat. Per. U.Atayeva. - TSGU. 229, 1972, 26-57.

Rabbani, Aziz Ghulam

1. Al-Biruni and his Academic Conquests. - "al-Biruni" [9], 1979, 158-159.

Rabi` al-Usquf (No 250)

1. Le Calendrier de Cordoue de l'année 961. Texte arabe et ancienne traduction latine, publié par R.Dozy, Leyde, 1873.
2. Santoral hispano-mozarabe escrito en 961 por Rabi ben Zaid, obispo de Ilileris. Trad. F.Simonet. - Ciudad de Dios. 5, Valladolid, 1891, 105-116, 192-212.
3. Le Calendrier de Cordoue publié par R.Dozy. Nouvelle édition, accompagnée d'une traduction française annotée par Ch.Pellat. Leyde, 1961.

Rada, W.S.

1. A catalogue of Medieval Arabic and Islamic Observations of Comets During the Period A.D. 700-1600.- ZGAIW, 13, 1999-2000, 71-92.

Radavî, Maulavî Qâsim Hasî' and `Abd-al-Muqtadir

1. Catalogue raisonné of the Buhar Library. Catalogue of the Persian Manuscripts of the Buhar Library. - I. Calcutta, 1931.

Raddatz, H. P.

1. Die Stellung und Bedeutung des Sufyan aṯ-Ṯaurí (gest. 778). Ein Beitrag zur Geistesgeschichte des frühen Islam, Bonn, 1967.

Radev, Radi

1. Iz istoriyata na arabskata filosofiya. Sofiya, 1966.

Ragep, Faiz Jamil

1. Cosmography in the "Tadhkira" of Nasir al-Din al-Tusi. 1-2, Thesis. Ann Arbor, 1984.
2. Two Versions of the Tusi Couple. - "From Deferent to Equant" [1], 1987, 329-356.
3. Nasir al-Din al-Tusi's Memoir on Astronomy (al-Tadhkira fi `ilm al-hay'a) with Translation and Commentary. 1-2. N.Y. - B. - Hb., 1993.
4. Al-Battani, Cosmology, and the Early History of Trepidation in Islam. - "From Baghdad to Barcelona" [1]. I, 1996, 267-298.
5. Al-Hashimi. - ENWC. 1997, 394-395.
6. Nasir al-Din al-Tusi. - ENWC. 1997, 757-758.
7. The Persian Context of the Tusi Couple. - ACIHS XX, 1997, 62.

Ragep, F. J. and Kennedy, E. S.

1. A Description of Zahiriyya (Damascus) MS 4871 a Philosophical and Scientific Collection. - JHAS. 5, 1981, 85-108.

al-Rahbi (No 493)

1. Al-Urjuza al-Rahbiyya. al-Qahira, 1310 h. [1892-1893].

Rahman, Abdur (b. 1923)

1. Muslim Contributions to Science and Culture. Lahore, 1965.
2. Alberuni and Some Problems of Medieval Science. - "al-Biruni" [12]. II, 1976, 29.

Rahman, Abdur, Alvi, M. A., Khan Ghori, S. A., and Samba Murthy, K. V.

1. Science and technology in Medieval India. A Bibliography of Source Materials in Sanskrit, Arabic and Persian. New Delhi, 1982 (STMI).

Rahman, F. and Pingree, D.

1. `Ali Qusji. EIr. 1. 1982. 876-877.

Rahman, Mushtaqur

1. Al-Mas`udi. - ENWC. 1997, 604.
2. Al-Muqaddasi. - ENWC. 1997, 753.

Rahmatullayev, Nazrullo

1. Filosofskiye vzglyady Ibn Sina v knige "Ukazaniya i nastavleniya". Dushanbe, 1980.

Rai, R. N.

1. Al-Biruni and Indian Eras. - "al-Biruni" [13], 1975, 166-173.

Rajabov, Ishaq Raziqi ughli

1. K istorii notnoy pis'mennosti na Vostoke. - ONU. 1962, No 18, 32-58.
2. Rukopisnyye istochniki po istorii muzykal'noy kul'tury narodov Sredney Azii iz sobraniya vostochnykh rukopisey AN Uz. SSR. ADK (fl), Lg., 1955.
3. Forobiyning muzika sohasidagi merosi haqida. - ONU. 1973, No 6, 49-55.

Rajabov, P. R. and Saghadeyev A. V.

1. Blizhniy i Sredniy Vostok. - "Muzykal'naya éstetika" [1]. 1967, 245-258.

Rajabov, U. A.

1. Vliyanie idey Ibn Sina na srednevekovuyu filosofiyu i sovremennuyu kosmologiyu. - "Ibn Sina" [16], 1981. 128-138.

Ramazanova, Sara Aqzam qyzy

1. Vostochnyye srednevekovyye teorii dvizheniya Luny i planet. - "Matematika Vostoka" [1], 1977, 97-107.
2. Matematicheskaya traktovka graficheskikh metodov arabskikh astronomov. - "Matematika Vostoka" [2], 1978, 161-168.
3. Matematicheskiye priyomy opredeleniya dliny teni gnomona u arabskikh astronomov. - "Matematika Vostoka" [2], 1978, 170-178.
4. Srednevekovyye metody astroopredeleniy geograficheskikh koordinat v stranakh Blizhnego i Srednego Vostoka. ADK (fm). M., 1989.

Ranking, George Spiers Alexander

1. The Life and Works of Rhazes. - Proc. of XVII Internat. Congress of Medicine (London, 1913). 23. L., 1914. 237-268.

"al-Rasail al-mutafarriqa"

1. al-Rasail al-mutafarriqa fi'l-hay'a li'l-mutaqaddimin wa mu`asiray al-Biruni. Rasa'ilu'l-matafarriqa fi'l-mutaqadimin wa mu'asiray il-Biruni; Containing Eleven Important Treatises on Astronomy and Other Subjects Contributed by the Famous Predecessors and Contemporaries of al-Biruni (9th, 10th, 11th Century A.D.). Haydarabad - Hyderabad, 1367 h. - 1948.

Rashed, Roshdi (b. 1936)

1. Le "Discours de la Lumière" d'Ibn al-Haytham (Alhazen). Traduction française critique. - RHSA. 21, 1968, 197-224; [33], 1992, No 5.
2. Le modèle de la sphère transparente et l'explication de l'arc-en-ciel: Ibn al-Haytham, al-Farisi. - RHSA. 23. 1970, 109-140; [33], 1992, No 3.
3. Optique géométrique et doctrine optique chez Ibn Al Haytham. - AHES. 6, 1970, 271-298; [33], 1992, No 2.
4. L'induction mathématique: al-Karaji, as-Samaw'al. - AHES. 9, 1972, 1-21; [25], 71-91.
5. Ibrahim ibn Sinan. - DSB. 7, 1973, 2-3.
6. Kamal al-Din al-Farisi. - DSB. 7, 1973, 212-239.
7. Al-Karaji. - DSB. 7, 1973, 240-246; [25], 31-42.
8. L'arithmétisation de l'algèbre au 11ème siècle. - ACIHS XIII (M., 1971), 3-4, 1974, 63-79.
9. Résolution des équations numériques et Algèbre: Şaraf-al-Din al-Tusi, Viète. - AHES. 12, 1974, 244-290; [25], 147-194.
10. Algèbre et Linguistique: L'analyse combinatoire dans la Science Arabe. - Philosophical of Science. Dordrecht, 1974, 383-399; [25], 245-257.
11. Les travaux perdus de Diophante. - RHSA. 27, 1974, 97-127; 28, 1975, 3-30.
12. Recommencements de l'algèbre aux XIe et XIIe siècles. - "Cultural Context", 1975, 33-60; [25], 43-70.
13. Al-Biruni et l'algèbre. - "al-Biruni" [12], II, 1976, 63-74.
13a. L'histoire d'algèbre et l'invention des fractions décimales: al-Samaw'al. - ISHAS I. 1, 1977, 169-186; II, 1978, 133.
14. L'extraction de la racine nième et l'invention de fractions decimales (XI-XII siècles). - AHES. 18, 1978, No 3, 191-243; [25], 93-145.
15. Lumière de vision: l'application des mathématiques dans l'optique d'Ibn-al-Haytham. - R. Taton. Roemer et la Vitesse de la lumière. P., 1978; [33], No 4.
16. Un problème arithmético-géométrique de Šaraf al-Din al-Tusi. - JHAS. 2, 1978, No 2, 233-254.
17. L'analyse diophantienne au Xe siècle: l'example d'al-Khazin. - RHSA. 32, 1979, No 3, 193-222; [25], 195-225.
18. Rushdi Rashid. Ibn al-Haytham wa `amal al-musabba`. La construction de l'heptagone régulier par Ibn al-Haytham. - JHAS. 3, 1979, No 2, 309-387.
19. Ibn al-Haytham et le Théorème de Wilson. - AHES. 22, 1980, No 4, 305-321, [25], 227-243.
20. Rushdi Rashid. Ibn al-Haytham wa hajm al-mujassam al-mukafi. Ibn al-Haytham et la mesure du Paraboide. - JHAS. 5, 1981, 191-262.
21. Rushdi Rashid. Nusus li-ta'rikh al-a`dad al-mutahabba wa hisab al-tawafukat. Matériaux pour l'histoire des nombres amiables et de l'analyse combinatoire. - JHAS. 6, 1982, 209-277.
22. Ideya algebry po al-Khorezmi. - "al-Khwarizmi" [1], 1983, 95-108.
23. L'idée de l'algèbre selon al-Khwarizmi. - Fundamenta scientiae. 1983, No 4, 87-100; [25], 17-29.
24. Nombres amiables, parties aliquotes et nombres figurés. - AHES. 28. 1983, No 2, 107-147 ; [25]. 259-299.

25. Entre Arithmétique et Algèbre. Recherches sur l'Histoire des Mathématiques Arabes. P., 1984.
25a. Mathématiques et philosophie chez Avicenne. - "Etudes sur Avicenne". P., 1984, 29-39.
26. L'oeuvre mathématique de Šaraf al-Din al-Tusi. Algèbre et géométrie au XII^{ème} siècle. P., 1987.
27. Al-Sijzi et Maimonide: commentaire mathématique de la proposition 11-14 des Coniques d'Apollonius. - AIHS. 37, 1987, No 119, 263-295; [33], No 12.
28. Ibn al-Haytham et les nombres parfaits. HM. 16, 1989, 343-352; [33], No 11.
28a. Problems of the Transmission of the Greek Scientific Thought into Arabic: Examples from Mathematics and Optics. - History of Sciences. 27, 1989, 199-209.
29. A Pioneer in Anaclastics: Ibn Sahl on Burning Mirrors and Lenses. - Isis. 81, 1990, 464-490; [33], No 6.
30. Al-Samaw'al, al-Biruni et Brahmagupta: les méthodes d'interpolation. - ASP. 1, 1991, No 1, 101-160; [33], No 12.
31. L'analyse et la synthèse selon Ibn al-Haytham. - "Mathématiques et Philosophie" 1991, 131-162; [33], No 14.
32. La philosophie des mathématiques d'Ibn al-Haytham: 1: L'analyse et la synthèse. - MIDEO. 20, 1991, 31-231.
33. Optique et Mathématiques. Recherches sur histoire de la pensée scientifique en arabe. Aldershot, 1992.
34. De Constantinople à Bagdad: Anthémius de Tralles et al-Kindi. - "Syrie de Byzance à l'Islam", 1992, 165-170.
35. Archimède dans les mathématiques arabe. - "Archimède", 1992, 43-61.
36. Géométrie et Dioptrique au X^{e} Siècle: Ibn Sahl, al-Quhi et Ibn al-Haytham. P., 1993.
37. Les mathématiques infinitésimales du IX^{e} au XI^{e} siècle. 2: Ibn al-Haytham (Travaux en mathématiques infinitésimales). L. 1993.
38. Al-Kindi's Commentary on Archimedes' "Measurement of a Circle". - ASP. 3, 1993, No 1, 7-53.
39. La philosophie des mathématiques d'Ibn al-Haytham: 2: Les Connus. - MIDEO. 21, 1993, 87-275.
40. Al-Yazdi et l'équation $\sum_{n=1} nx_i^2 = x^2$. - Historia scientiarum, (2) 4, 1994, No 2, 79-101.
41. The Development of Arabic Mathematics between Arithmetic and Algebra. Dordrecht - Boston - L. 1994.
41a. Riyyadiyyat. - EI^2. 8, 1994, 549-562.
42. Les mathématiques infinitésimales du IX^{e} au XI^{e} siècle. 1: Fondateurs et Commentateurs: Banu Musa, Ibn Qurra, Ibn Sinan, al-Khazin, al-Quhi, Ibn al-Samh, Ibn Hud. L., 1995.
43. Algebra. - EHAS. II, 1996, 349-375.
44. Combinatorial Analysis, Numerical Analysis, Diophantine Analysis and Number Theory. - EHAS. II, 1996, 376-417.
45. Infinitesimal Determinations, Quadratures of Lunules, and Isoperimetric Problems. - EHAS. II, 1996, 418-446.
46. Geometrical Optics. - EHAS. II, 1996, 643-671.
47. Les mathématiques infinitésimales du IX^{e} au XI^{e} siècle. 3: Ibn al-Haytham (Etudes sur les coniques et sur leur applications). L., 1997.
48. Le commentaire par al-Kindi de "l'Optique" de Euclide, un traité jusqu'ici inconnu. - ASP. 7, 1997, No 1, 3-56.
49. Ibn al-Haytham. - ENWC. 1997, 405-408.
50. Ibn Sahl. ENWC. 1997, 432-433.
51. Ibrahim ibn Sinan. - ENWC. 1997, 441-442.
52. Transmission et innovation l'exemple du miroir parabolique. - ACIHS XX. 1997, 242.
53. Al-Qūhī: from meteorology to astronomy.-ASP, 11, 2001, No 2, 157-204.

Rashed, R. and Djebbar, A.

1. L'Oeuvre algébrique d'al-Khayyam. Aleppo, 1981.

Rashid al-Din, Fadlallah (No 656)

1. Histoire de Mongols, de la Perse, écrite en persan par Raschid-Eldin. Publiée, traduite en français par M. Quatremère. P., 1836.
2. Sbornik letopisey. 3. Per. A.K.Arendsa. M.-Lg., 1946.

al-Rasmuki (No 1291)

1. Ajniha al-ghurab. 1322 h. [1904].

Ravius, S.

1. Specimen arabicum continens descriptioem ex excerpti libri Achmedis Teifaschii de gemmis et lapidibus pretiosis. Trajecti ad Rhenum, 1784.

Rawdati, Sayyid Muhammad `Ali

1. Fihrist-i kutub-i khatti-yi Kitabkhanaha-yi Isfahan. Isfahan, 1341 s.h. [1962].

Rawshan, Muhammad

1. Fihrist-i nuskhaha-yi khatti-yi Kitabkhana-yi `umumi-yi Jam`iyat-i nashiran-i farhang-i Rasht. Tehran, 1352 s.h. [1973].

Raynov, Timofey Ivanovich

1. Velikiye uchonyye Uzbekistana (IX-XI vv.). Tash., 1943.
2. Al-Biruni - velikiy uchoenyy Sredney Azii. - IAN SSSR, otd. lit. i yazyka. 8, 1949, 101-116.

Razavi, Mahdi Amin

1. Suhrawardi and the School of Illumination. Richmond, 1996.

al-Razi (No 142)

1. Razesi Liber ad Almansorum. Mediolani, 1481.
2. Razesi liber dictus Elhavi. Bresciae, 1486.
3. Rhazes de variolis morbilis, arabice et latine, cumaliis nonnulis eiusdem argumenti, ed. J.Channing, L., 1766.
4. Treatise of Smallpox and Measles. Transl. by W.A.Greenhill, L., 1848; Medical Classics. 4, No 1, Baltimore, 1939.
5. Kitab manafi` al-`aghdhiya wa daf` madarriha. al-Qahira, 1305 h. [1888].
6. Kitab al-sira al-falsafiyya. Ba ihtimam-i `Abbas Iqbal. Tehran, 1315 s.h. [1936].
7. Al-Razis Buch Geheimnis der Geheimnisse mit Einleitung und Erläuterungen in deutscher Übersetzung von J.Ruska. - QSNM. 6, 1937.
8. Kitab al-hawi fi'l-tibb, 1-21. Haydarabad, 1938-1968.
9. Rasail falsafiyya li-Abu Bakr Muhammad ibn Zakariya al-Razi. Jama`aha wa sahahaha B.Kraus. Abu Bakr Mohammadi filii Zachariae Raghensis (Razi) opera philoso-phica. Coll. et ed. P.Kraus. al-Qahira, 1358 h. - Cahirae, 1939.
10. The Spiritual Physics of Rhazes. Transl. by A.J.Arberry. L., 1950.
11. Rhazes' Kitab al-Murshid aw al-Fusul (The Guide or Aphorisms) with Texts Selected from his Medical Writings. Ed. with an Introduction by A.Z.Iscander. - MMMA. 7, 1961.
12. al-Sira al-falsafiyya. Ba tashih u muqaddima-yi P.Kraus wa tarjama-yi `Abbas Iqbal, ba ihtimam-i sharh-i ahwal u athar u afkar az Mahdi Muhaqqiq. Muhammad ibn Zakariya al-Razi. Ed. by P.Kraus and transl. into Persian by A.Iqbal with an account of his life, works and ideas by M.Mohaqqiq. Tehran, 1343 s.h. - Tehran, 1964.
13. Abu Bakr Roziy wa uning shagirdi yozid qoldirgan kasalliklar tarihi. Kirish, tarjima, izoh wa kursatkichlar H.Hikmatullayevniqi. Toshent, 1974.
14. Otryvki iz filosofskikh sochineniy. Sost. M.Usmanov i A.D.Sharipov. - "Materialy" [2], 1976, 103-108.
15. Kitab al-madkhal ila sina`a al-tibb wa-huwa Isaghuji. Libro de la introduccion al arte de medicina o "Isagoge". Trad. por M. de la Concepcion Vasquez de Benito. Salamanca, 1979.
16. Kitab ma al-fariq. Tahqiq Salman Kataya. Halab, 1399 h. [1979].
17. Guide de médecin nomade, aphorismes presentés et trad. de l'arabe par al-Arbi Moubachir. P., 1980.

al-Razi (No 535)

1. Sharh al-Isharat. Istanbul, 1290 h. [1873].

1a. Al-Sirr al-maktum fi mukhataba al-nujum. Bombay, 1312 h. [1894].

1b. Jami` al-`ulum. Tashkand, 1318 h. [1897].

2. Muhassal afkar al-muqaddimin wa'l-muta'akhkhirin min al-`ulama wa'l-hukama wa' l-mutakallimin. al-Qahira, 1323 h. [1905].
3. Lawami` al-bayyinat fi'l-asma' wa'l-sifat. al-Qahira, 1323 h. [1905].
4. Lubab al-Isharat. al-Qahira, 1326 h. [1908].
5. Mabahith al-mashriqiyya. 1-2. Haydarabad, 1342 h. [1925]; Tehran, 1345 s.h. [1966].
6. Kitab al-arba`in fi usul al-din. 1353 h. [1934].
7. Asas al-Taqdis fi `ilm al-kalam. al-Qahira, 1354 h. [1935].

Rebstock, Ulrich

1. Rechnen im islamischen Orient. Die literarischen Spuren der praktischen Rechenkunst. Darmstadt, 1992.
2. Der Mu`amalat-Traktat des Ibn al-Haytam. - ZGAIW. 10, 1995/96, 61-121.
3. Weights and Measures in Islam. - ENWC. 1997, 1019.
4. The Kitāb al-Kāfī fī mukhtaṣar (al-ḥisāb) al-hindī of al-Ṣardafī.- ZGAIW, 13, 1999-2000, 189-204.

Regier, Mary H.

1. Kennedy's Geographical Tables of Medieval Islam: an Exploratory Statistical Analysis. - "From Deferent to Equant" [1], 1987, 357-372.

Rehatsek, Edward

1. Catalogue Raisonné of the Arabic, Hindostani, Persian and Turkish Manuscripts in the Mulla Firuz Library. Bombay, 1873.

Reich, S. and Wiet, G.

1. Un Astrolabe Syrien du XIV siècle. - Bulletin de l'Institut d'Archéologie Orientale. 38-39, 1939-1940, 195-202; "Ibn al-Shatir" [1], 1976, 36-43.

Reinaud, Joseph Toussaint (1795-1867)

1. La géographie arabe. P., 1649, 1868.
1. Arab Geography. Transl. and annot. by S.M.Ali. Aligarh, 1960.

Reinaud, J. T. and Favé, Ildefonse

1. Histoire de l'artillerie. I. Du feu grégeois, des feux de guerre et des origines de la poudre à canon. P., 1845.

Reisch, G.

1. Margarita philosophica. Basileae, 1583.

Rejchman, J.

1. Szkic o Ewliji Czelebim i jego dele. - Chelebi Evliya [6], 1969, IX-XXXVI.

Rekaya, M.

1. al-Ma'mun b. Harun al-Rashid. - EI^2. 6, 1988, 331-339.

Remondon, Denise

1. Al-Ahlaq wa-l-infi'alat an-nafsaniyya. - "Ibn Sina" [4], 4, 1954, 19-29./198/

Renan, Ernest (1823-1892)

1. Averroès et Averroïsme. P., 1852, 1862, 1867, 1882; F. M., 1985.

Renaud, Henri Paul Joseph (1881-1945)

1. Additions et corrections à Suter "Die Mathemamatiker und Astronomen der Araber". - Isis. 18, 1932, 166-183 (MAA^3).
2. Un prétendu catalogue de la bibliothèque de la Grande Mosquée de Fès. - Hespéris. 18, 1932, 76-99.
3. Notes critiques d'histoire des sciences chez les musulmans. I. Les Ibn Baso. - Hespéris. 24, 1937, 1-12.
4. Ibn al-Banna de Marrakesh, sufi et mathématicien du XIII/XIV s. - Hespéris. 25, 1938, 13-42.
5. Quelques constructeurs d'astrolabes en Occident musulman. - Isis. 34, 1942, 21-23.
6. Astronomie et astrologie marocaiñes. - Hespéris, 29, 1942, 41-633.
7. Sur un passage d'Ibn Khaldun relatif à l'histoire des mathématiques. - Hespéris. 31, 1944, 35-47.

Renaud, Michel

1. Le De celo et mundo d'Avicenne. - Bull. de Philologie Médievale. 15, 1973 [1975], 92-130.

Rescher, Nicholas

1. Al-Farabi. An Annotated Bibliography. Pittsburgh, 1962.
2. Al-Kindi. An Annotated Bibliography. Pittsburgh, 1964.
3. The Development of Arabic Logic. Pittsburgh, 1964.

Rescher, Nicholas and Khatchadourian, Haig

1. Al-Kindi's Epistle on the Finitude of the Universe. - Isis. 56, 1965. No 4, 426-433.
2. Al-Kindi's Treatise on the Distinctiveness of the Celestial Sphere. - Islamic Studies. Karachi. 4, 1965, 45-54.

Rescher, Oscar [Osman]

1. Mitteilungen aus Stambuler Bibliotheken I und II. - ZDMG. 64, 1910, 195-217, 528; "Handschriften" [1], I, 1986, 1-64.

2. Arabische Handschriften der Köprülü-Bibliothek. - Mitt. des Seminars für Orientalische Sprachen, Westasiatische Studien. 14, 1911, 163-198; "Handschriften" [1], I. 1986, 104-139.
3. Arabische Handschriften des Top Kapu Seraj. - Rivista degli Studi orientali. 4, 1911-1912, 695-733; "Handschriften" [1], I. 1986. 65-103.
4. Weitere arabische Handschriften der Köprülü-Bibliothek nebst anderen des Jeni Ğami und Nur-i Otmanije. - Mitt. des Seminars für Orientalische Sprachen, Westasiatische Studien. 15, 1912, 1-29; "Handschriften" [1], I. 1986, 140-168.
5. Über einige arabische Handschriften der Hamidije-Bibliothek. - Zeitschr. für Assyriologie und verwandte Gebieten. 27, 1912, 147-158; "Handschriften" [1], I. 1986, 169-180.
6. Über arabische Handschriften der Aja Sofia. - Wiener Zeitschr. für die Kunde des Morgenlandes. 26, 1912. 63-95; "Handschriften" [1], I. 1986, 181-213.
7. Mitt. aus Stambuler Bibliotheken. - Melanges de la Faculté Orientale de l'Université St.-Joseph de Beyrouth. 5, 1912, 489-540; "Handschriften" [1], I. 1986, 214-265.
8. Über arabische Manuskripte der Laleli-Moschee (Nebst einigen anderen), noch unbeschriebenen arabische Codices. - Le Monde oriental. 7, 1913, 97-136; "Handschriften" [1], I. 1986, 266-305.
9. Notizen über einige arabischen Handschriften aus Brussaer Bibliotheken nebst Manuskripten der Selim Ağa (Skutari). - ZDMG. 68, 1914, 47-63; "Handschriften" [1], I. 1986, 306-322.
10. Kütübhané-i-Feizijé (in der Nähe der Fatih-Moschee) und `Aşir Efendi. I-III (Nachtrag). - ZDMG. 68, 1914, 337-399; "Handschriften" [1], I. 1986, 323-337.
11. Die Geschichten und Anekdoten aus Qalyubī's Nawâdir. Stuttgart, 1920.
12. Eine kurze Schlußbemerkung zu meinen Mitteilungen über "arabische Handschriften aus Stambuler Bibliotheken". - Zeitschr. für Semitistik. 1, 1922, 216-217; "Handschriften" [1], I. 1986, 338-339.
13. Neuerwerbungen der Universitätsbibliothek von Constantinopel. - Zeitschr. für Semitistik. 3, 1924, 247-253; "Handschriften" [1], I. 1986, 340-346.
14. Excerpte und Übersetzungen aus den Schriften des Philologen und Dogmatiker Ğahiz aus Başra (150-250 H.). Stuttgart, 1931.

Reynolds, J. H.

1. The Hakemite Tables of Ebn Jounis. - Nature. 28, 1931, 913-914.

Rhodokanakis, N.

1. Über einige arabische Handschriften der öffentlichen Bibliotheken in Kostantinopel. - Orientalische Studien. Festschrift für Theodor Nöldeke 1. Gießen, 1906, 385-392; "Handschriften" [2], I. 1986, 347-354.

Ribera, J.

1. Historia de la musica àrabe medieval. Madrid, 1927.

Richter, G.

1. Verzeichnis der orientalischen Handschriften der Staats- und Universitätsbibliothek Breslau. Lpz., 1933.

Richter-Bernburg, Lutz

1. Al-Biruni's Maqala fi tastih al-suwar wa-tabtikh al-kuwar. A Translation of the Preface with Notes and Commentary. - JHAS. 6, 1982, 113-122.
2. Sa`id, the Toledan Tables, and Andalusian Science. - "From Deferent to Equant" [1], 1987, 373-401.

Ridawi, Mudarris

1. Ahwal wa athar-i Muhammad ibn Muhammad ibn al-Hasan al-Tusi mulaqqab ba khwaja Nasir al-Tusi. Tehran, 1334 s.h. [1955].

Ridawi, Sayyid Faraz `Ali

1. Fihrist-i nuskhaha-yi farsi wa `arabi mawjud dar kitabkhana-yi Anjuman-i Turki dar Karachi. 1346 h. [1927].

Riedel, W.

1. Katalog over Kungl. Bibliotekets Orientaliska handskrifter. Stockholm, 1923.

Rieu, Charles (1820-1902)

1. Supplementum Catalogi codicorum manuscriptorum orientalium qui in Museo Britannica asservantur. - Londini, 1871.
2. Catalogue of the Persian manuscripts in the British Museum. 1-3, L., 1879-1883.
3. Catalogue of the Turkish manuscripts in the British Museum. L., 1888.
4. Supplement to the Catalogue of the Arabic manuscripts in the British Museum. L., 1894.

5. Supplement to the Catalogue of the Persian manuscripts in the British Museum. L., 1895.

al-Rifa`i, Ahmad Farid

1. al-Ghazali. al-Qahira, 1936.

Ritter, Hellmut (1892-1971)

1. Schriften Ja'qub ibn Ishâq al-Kindî's in Stambuler Bibliotheken. - Archiv Orientalni. 4, 1932, 363-372.; "Handschriften" [1], II. 1986, 4.9-448.
2. Aus türkischen Bibliotheken. 1. Historiker. 2. Werke Berunî's. 3. Mystiker. - Orientalia. 1, 1933, 67-83; "Handschriften" [1], II. 1986, 459-475.
3. Orientalische Steinbücher und Persische Fayencetechnik. Istanbul, 1935; "Handschriften" [1], II. 1986, 525-539.
4. Philologika IX. Die vier Suhrawardî. Ihre Werke in Stambuler Handschriften. - Der Islam. 24, 1937, 200-286, 25, 1938, 35-86; "Handschriften" [1], II. 1986, 94-163
5. Philologika XIII. Arabische Handschriften in Anatolien und Istanbul. - Oriens. 2, 1949, 236-314, 3, 1950, 31-107; "Handschriften" [1], II. 1986, 236-391.
6. Ayasofya kütüphanesinde tefsir ilmine ait arapça yazmalar. - Türkiyat Mecmuası. 7-8, 1945, 1-93; "Handschriften" [1], II. 1986, 541-636.
7. Autographs in Turkish Libraries. - Oriens. - 6, 1953, 63-90; "Handschriften" [1], II. 1986, 637-664.
8. Al-Birunis Übersetzung des Yoga-Sutra des Patanjali. - Oriens. 9, 1956, 165-200.
9. Literatur über die türkischen Bibliotheken. - Oriens. 13-14, 1961, 336-339; "Handschriften" [1], II. 1986, 679-682.

Rius, Monica.

1. La orientacion de las mezquitas segun el Kitab al-dala'il al-qibla de al-Mattiyi (s. XII). - "From Baghdad to Barcelona" [1]. II, 1996, 781-830.

Rizq, Abdul Munim

1. History of Ancient Egyptian and Arabic Engineering and Industry. `Abd al-Mun`im Ahmad Rizq. Ta'rikh al-`ulum al-handasiyya wa sina`at `inda qudama al-misriyyin wa'l-`arab. - ISHAS 1, I. 1977, 535-545; II. 1978, 246-247.

Rizvi, Saiyid Samad Husain

1. Direction of Qibla by Means of Sun-Shadow. - International Congress of Mathematical Sciences. Karachi, 1975.
2. A Newly Discowered Book of al-Biruni: Ghurrat-uz-Zijat and al-Biruni's Measurement of Earth Dimensions. - Hamdard, 21, 1978, No 1-6, 21-90; "al-Biruni" [9], 1979, 605-680.

Rizvi, Syed Aftab Husain

1. On Trisection of an Angle Leading to the Derivation of a Cubic Equation and the Computation of the Value of Sine. - IJHS. 19(1), 1963, 77-85.

Rizvi, Vaqar Ahmad

1. Khayyam as Geometrician. - International Congress of Mathematical Sciences. Karachi, 1975.

Roberts, Victor

1. The Solar and Lunar Theory of Ibn ash-Shatir. A Pre-Copernican and Copernican Model. - Isis. 48, 1957, 428-432; "Ibn al-Shatir" [1], 1976, 44-48; "Kennedy" [1], 1983, 50-54.
2. The Planetary Theory of Ibn al-Shatir: Longitudes of the Planets. - Isis. 53, 1962, 492-499.
3. The Planetary Theory of Ibn al-Shatir: Latitudes of the Planets. - Isis. 57, 1966, 208-219; "Ibn al-Shatir" [1], 1976, 81-92; "Kennedy" [1], 1983, 72-83.

Röcker, Hans Joachim

1. Avicenna und seine Bearbeiter in Handschriften der Forschungsbibliothek Gotha. - "Ibn Sina" [12], 1980, II, 79-94.

Rodet, L.

1. L'algèbre d'Alkarizmi et les méthodes indiens et grecques. - JA (7). 11, 1878, 5-100.

Rohr, René R. J.

1. Sonnenuhr und Astrolabium im Dienste der Moschee. - Centaurus. 18. 1973, 44-56.
2. Le cadran solaire analemmatique. - Centaurus. 20. 1976, 276-278.

Romaskevich, Aleksandr Aleksandrovich (1885-1942)

1. Spisok persidskikh, turetsko-tatarskikh i arabskikh rukopisey Biblioteki Petrogradskogo universiteta. - Zapiski Kollegii vostokovedov pri Aziatskom Muzeye Akademii nauk. 1, 1925, 353-371.

Rommel, Christoph

1. Ueber den Edrisi und dessen Geographien. - Allgemeine Geographischen Ephemeriden, Weimar, 13, 1804, 418-437, 14, 1804, 243-244; "Studies on al-Idrisi" [1], 1992, 32-53.

Rommevaux, S; Djebbar, A; Vitrac, B.

1. Remarques sur l'histoire du texte des Elements d'Euclide.-AHEC, 55, 2001, No 3, 221-295.

Romodin, Vadim Aleksandrovich

1. Velikiy uchonyy Sredney Azii Ibn Sina (Avitsenna). M., 1952.

Ronchi, Vasco (1897-1988)

1. Sul contributo di Ibn Al-Haitham alle teorie della visione e della luce. - ACIHS VII (Jerusalem, 1953), 516-521.

Roque, Jean de la

1. Description Générale de l'Arabie. Faite par le Sultan Ismael Abulféda, traduite en Français sur les meilleurs manuscripts, éclaircie par les Notes. - d'Arvieux, Laurent. Voyage dans la Palestine, vers le Grand Emir, Chef des Princes Arabes du Désert, connus sous le nom de Bédouins, ou d'Arabes Scenites, qui se disent la vraie posterité d'Ismael fils d'Abraham. Fait par ordre du Roi Louis XIV. Amsterdam, 1718, 263-348; "Mathematical Geography" [4], 1992, 1-86.

Rosen, Edward

1. Copernicus and al-Bitruji. - Centaurus. 7, 1961, No 2, 152-155,

Rosen, Friedrich

1. Ein wissenschaftlicher Aufsatz 'Umar-i Khayyàms. - ZDMG. 4 (79), 1925, 133-135.

Rosen, Viktor Romanovich (1849-1908)

1. Collections scientifiques de l'Institut des langues orientales du Ministère des Affaires Etrangères. 1. Manuscrits Arabes. SPb., 1877.
2. Notices sommaires des manuscrits Arabes du Musée Asiatique. SPb., 1881.
3. Les manuscrits orientaux de la collection Marsigli à Bologne. - Memoire della Accad. dei Lincei. 12, No 3, 1884.
4. Collections scientifiques de l'Institut des langues orientales du Ministère des Affaires Etrangères. 3. Manuscrits Persans. SPb., 1886.
5. "Indiya" Biruni. - Zap. Vost. otd. Imp. Russ. arkheol. obshchestva. 3, 1888, 147.

Rosenberger, Ferdinand

1. Die Geschichte der Physik in Grudzügen. I. Geschichte der Physik im Altertum und im Mittelalter, Braunschweig, 1882.

Rosenfeld, Boris Abramovich (b. 1917)

1. O matematicheskikh rabotakh Nasiréddina Tusi. - IMI. 4, 1951, 489-512.
2. Mähämmäd Näsiräddin parallellik postulaty haqqynda. Muhammed Nasireddin o postulate parallel'nosti. - "al-Tusi" [1], 1951, 16-18, 47-49.
3. Mähämmäd Näsiräddininin riyazi äsärläri haqqynda. - IAN Azerb. SSR. 1953, No 4, 35-50.
4. O matematicheskikh rabotakh Omara Khayyama. - Uspekhi matem. nauk. 8, 1953, No 3, 170-171; Uch. zap. Azerb. gos. universiteta. 1957, No 9, 3-22.
5. Nekotoryye issledovaniya po predystorii neyevklidovoy geometrii. - Kagan [1], 2, 1956, 322-330.
6. O matematicheskikh rabotakh Jemshida Giyaseddina Kashi. - Uch. zap. Azerb. gos. universiteta. 1957, No 5, 3-20.
7. New Researches in the Preistory of Lobachevsky's Geometry and in the History of its Interpretations. - ACIHS VIII (Firenze, 1956), 1957, 138-141.

8. Dokazatel'stva pyatogo postulata Yevklida srednevekovykh matematikov Hasana ibn al-Haysama i L'va Gersonida. Per. i komm. B.A.Rozenfel'da. - IMI. 11. 1958, 733-782.
9. Popytka kvadratichnogo interpolirovaniya u Abu Rayhana al-Biruni. - IMI. 12, 1959, 421-430; Pis'mo v redaktsiyu. - IMI. 15, 1963, 473.
10. Arabskiye i persidskiye fiziko-matematicheskiye rukopisi v bibliotekakh Sovetskogo Soyuza. - FMNSV. 1, 1966, 256-289.
11. The Theory of Parallel Lines in the Medieval East. - ACIHS XI (Warszawa - Krakow, 1965), P., 1968, 175-178.
12. Geometrical Transformations in the Medieval East. - ACIHS XII (Paris, 1968), P., 1971, 129-131.
13. Novyye dannyye ob avtore rimskogo izdaniya "Izlozheniya Yevklida Nasir ad-Dina at-Tusi". - VIYT. 1972, No 1(42), 36.
14. Rol' Beruni v rasshirenii ponyatiya o chisle. - ONU. 1973, No 7-8, 88-91.
15. Vazhnaya nakhodka po istorii matematiki, astronomii i optiki. - VIYT. 1974, No 47-48, 75-77.
16. Astronomicheskiy trud al-Biruni "Kniga vrazumleniya nachatkam nauki o zvyozdakh". - IAI. 12, 1975, 205-225.
17. Algebraicheskiy traktat as-Samav'ala. - IMI. 20, 1975.
18. Arabskiye rukopisi v Gosudarstvennoy biblioteke SSSR imeni V.I.Lenina. - VIYT. No 2(51), 100.
19. A Medieval Physico-mathematical Manuscript Newly Discovered in the Kuibyshev Regional Library. - HM. 2, 1975, 67-73.
20. al-Kaši. - SeT. 2, 1975, 177-178.
21. al-Khwarizmi. - SeT. 2, 1975, 189-190.
22. Nasir ad-Din at-Tusi. - SeT. 2, 1975, 432-433.
23. Thabit ibn Qurra. - SeT. 3, 1975, 191-192.
24. The List of Physico-Mathematical Works of Ibn al-Haytham Written by himself. - HM. 3, 1976, 75-76.
25. Istoriya neyevklidovoy geometrii. Razvitiye ponyatiya o geometricheskom prostranstve. M., 1976.
26. Mathematical Atomism and Infinitesimal Methods in the Medieval Near and Middle East. - ACIHS XV (Edinburgh, 1977), Wdunburgh, 1977, 41; Papers by Soviet Scientists. 2. Moscow, 1977, 1-11.
27. Spisok fiziko-matematicheskikh trudov Ibn al-Haysama, napisannyy im samim. - VIYT. 1977, No 1(58), 115.
28. Nekotoryye voprosy matematiki peremennykh velichin v traktate al-Biruni o tenyah. - IMI. 23, 1978, 226-230.
29. Vliyaniye Samarkandskoy shkoly Ulugbeka na razvitiye matematiki i astronomii za predelami Sredney Azii. - "Iz istorii" [3], 1979, 130-142.
30. O matematicheskikh rabotakh Kutb ad-Dina ash-Shirazi. - IMI. 25, 1980, 328-334.
31. O rabotakh Ibn Siny po matematike i astronomii. - "Ibn Sina" [8], 1980, 157-163.
32. Matematika i astronomiya Ibn Siny. - "Ibn Sina" [12], 1981, 101-105.
33. Ibn Sina's Works in Mathematics and Astronomy. - "Ibn Sina" [13], 1981, 2-12.
34. The Equivalent of Complex Numbers on the Medieval East. - ACIHS XVI (Bukharest, 1981), 1. București, 1981, 65.
35. Ob odnoy sisteme lineynykh uravneniy u Diofanta i al-Karaji. - IMI. 27, 1983, 142-146.
36. Neelementarnaya matematika v trudakh al-Khorezmi. - "al-Khwarizmi" [1], 1983, 135-140.
37. Muhammad ibn Musa al-Khorezmi. K 1200-letiyu so dnya rozhdeniya. - Matematika v shkole. 1983, No 3, 46-49.
38. O "Knige slozheniya i vychitaniya" al-Khorezmi. - ONU. 1983, No 6, 40-41.
39. Znacheniye matematicheskogo truda Alfonso dlya istorii matematiki. - Alfonso [1], 1983, 34-36.
40. Astronomiya stran islama. - IAI. 17, 1984, 67-122.
41. Sabit ibn Korra - matematik, mekhanik i astronom. - Ibn Qurra [10], 1884, 8-25.
42. "Densimetriya" al-Biruni. - VIYT. 1985, No 1, 91-95.
43. Teoriya chisel, geometriya i astronomiya v "Knige ob indiyskoy arifmetike" al-Khorezmi. - al-Khwarizmi [4], 1985, 66-72.
44. Vydayushchiysya sredneaziatskiy uchenyy Fergani. - ONU. 1985, No 6, 29-37.
45. A History of Non-Euclidean Geometry. Evolution of the Concept of a Geometric Space. N.Y.- Hb. - B. - L. - P. - Tokyo, 1988.
46. Baghdad Mathematical School in the 9th Century. - ACIHS XVIII, 1989, P2, 10; Materialy po istorii nauki i tekhniki. Studies on the History of Science and Technology. M., 1989, 117-118.
47. Sfericheskaya trigonometriya al-Khorezmi. - IMI. 32-33, 1990, 325-339.
48. "Geometric Trigonometry" in Treatises of al-Khwarizmi, al-Mahani, and Ibn al-Haytham. - "Vestigia" [1], 1993, 305-308.
49. Tashkentskiye rukopisi o matematicheskom atomizme, VIYT. 1953, No 2, 114-116.
50. Tashkent Manuscripts on Mathematical Atomism. SHMS. 12, 1993, Nos1-2, 97-101.

51. Religions and the Seven-Day Week. - Llull. 17, 1994, 141-156.
52. Geometry of Lie Groups. Dordrecht - Boston - L., 1997.
53. Al-Fazari. - ENWC, 1997, 30-31.
54. Geometry in Islamic World. - ENWC, 1997, 375-378.
55. Al-Kashi. - ENWC, 1997, 476-477.
56. Al-Kharaki. - ENWC, 1997, 478-479.
57. Khayyam. - ENWC, 1997, 479-480.
58. Nasir-i Khusraw. ENWC, 1997, 759.
59. Al-Saghani. - ENWC, 1997, 874-875.
60. Sundials in Islam. - ENWC, 1997, 921-922.
61. Thabit ibn Qurra. - ENWC, 1997, 969-970.
62. Ulugh Beg. - ENWC, 1997, 993.
63. Al-`Urdi. - ENWC, 1997, 994.
64. Mathematical treatise written in the Samarkand observatory of Ulugh Beg.- ZGAIW, in pres.

Rosenfeld, B. A. and Abdurahmanov, A.

1. Traktaty Beruni ob astrolyabiyakh. - "al-Biruni" [7], 1973, 85-89.

Rosenfeld, B. A. and Ahmedov, A.

1. "Kniga vrazumleniya nachatkam nauki o zvyozdakh" Beruni. - al-Biruni [43], 1975, 7-18.

Rosenfeld, B. A. and Grigorian, A. T.

1. Thabit ibn Qurra. - DSB. 13, 1976, 288-295.

Rosenfeld, B. A., Dobrovol'skiy, Igor' Georgiyevich, and Sergeyeva, N. D.

1. Ob astronomicheskikh traktatakh al-Fargani. - IAI. 11, 1972, 191-210.

Rosenfeld, B. A., Krasnova, S. A., and Kubesov, A. K.

1. Matematika stran Blizhnego i Srednego Vostoka v sredniye veka. - Matematika v shkole. 1964, No 3, 21-24, No 4, 16-24.
2. Riyaziyat-i sharq-i miyana wa nazdik dar sadaha-yi miyana. - Riyadiyat dar sharq. Tarjama-yi Parwiz Shahriyari. Tehran, 1352 s.h. [1974], 112-124.

Rosenfeld, B. A., Krasnova, S. A., and Rozhanskaya, M. M.

1. O matematicheskikh rabotakh Abu-r-Rayhana al-Biruni. - INTSB. 3, 1963, 71-92.

Rosenfeld, B. A. and Kubesov, A.

1. O matematicheskikh trudakh al-Farabi. - al-Farabi [17]. 1972, 7-14.
2. O matematicheskikh rabotakh al-Farabi. - "al-Farabi" [1], 1973, 31-37.

Rosenfeld, B. A., Kubesov, A. K., and Sobirov, G. S.

1. Kto byl avtorom rimskogo izdaniya "Izlozheniya Yevklida Nasir ad-Dina at-Tusi"? - VIYT. 20, 1966, 51-53.

Rosenfeld, B. A. and Rozhanskaya, M. M.

1. Astronomicheskiy trud al-Biruni "Kanon Mas`uda". - IAI. 10, 1969, 63-95.
2. Geometricheskiye preobrazovaniya i peremennyye velichiny u Ibrahima ibn Sinana. - IMEN. 9, 1970, 178-181.

Rosenfeld, B. A., Rozhnskaya, M. M., and Sokolovskaya, Z. K.

1. Abu-r-Rayhan al-Biruni (973-1048). M., 1973.

Rosenfeld, B. A. and Sergeeva, N. D.

1. Ob astronomicheskikh traktatakh al-Khorezmi. - IAI. 13, 1977, 201-218.

Rosenfeld, B. A., Safarov, Rajab Sattarovich, and Slavutin, Yevgeniy Iosifovich

1. Geometricheskaya algebra al-Sijizi. - IMI. 29, 1985, 321-325.

Rosenfeld, B. A. and Tagi-zade, A. K.

1. Mathematical Methods Used in Construction of Astronomical Instruments in the Arab Contries, Iran and Central Asia. - ACIHS XIV (Tokyo, 1974). 3, 1975, 339-342.

Rosenfeld, B. A. and Utsekha, L. G.

1. Astronomicheskiy traktat al-Biruni "Vydeleniye skazannogo po voprosu o tenyakh". - IAI. 14, 1978, 310-321.
2. Some Mathematical Discoveries in al-Biruni's "Shadows". - JHAS. 4, 1980, No 2, 332-336.

Rosenfeld, B. A. and Yushkevich, A. P.

1. Matematika v stranakh Blizhnego i Srednego Vostoka v sredniye veka. - Sovetskoye vostokovedeniye. 1958, No 3, 101-108, No 6, 66-76.
2. O traktate Nasir ad-Dina at-Tusi o parallel'nykh liniyakh. - IMI. 13, 1960, 475-482.
3. O traktate Kazi-zade ar-Rumi ob opredelenii sinusa odnogo gradusa. - IMI. 13, 1960, 533-538.
4. Dokazatel'stvo pyatogo postulata Yevklida u Sabita ibn Korry i Shams ad-Dina as-Samarkandi. - IMI. 14, 1961, 587-592.
5. Zhizn' i tvorchestvo `Omara Khayyama. - Khayyam [25], 1962, 11-66.
6. The prehistory of Non-Euclidean Geometry in the Medieval East. - Trudy XXV Mezhdunar. kongressa vostokovedov (M., 1960). 2. M., 1963, 90-96.
7. Omar Khayyam. M., 1965.
8. Nazaryia-yi Khayyam dar barayi khutut-i muwazi. - Riyadiyat dar sharq. Tarjamayi Parwiz Shahriyari. Tehran, 1352 s.h. [1974], 125-128.
9. Banu Musa. - LM. 1, 1980, 1422.
10. Teoriya parallel'nykh liniy na srednevekovom Vostoke. IX-XIV vv. M., 1983.
11. Nazariyya al-khutut al-mutawaziyya fi'l-masadir al-`arabiyya ma bayna al-qurun al-thalith wa'l-thamin li'l-hijra - al-tasi` wa-rabi` `ashar li'l-milad. Tarjamahi wa a`addahi al-duktur Sami Shalhub, al-duktur Kamal Najib `Abd al-Rahman. The Theory of Parallels in the Arabic Literature of the 9-14[th] Centuries. Ed. and transl. by Sami Chalhoub and K.N.Abdulrahman. Halab, 1410 h. - Aleppo, 1989.
12. Geometry. - EHAS. II, 1996, 447-494.

Rosenthal, Franz

1. Ahmad b. al-Tayyib as-Sarakhsi. A Scholar and Litterateur of the Ninth Century. New Haven, 1943.
2. From Arabic Books and Manuscripts. II. Kindiana. - JAOS. 69, 1949, 149-152.
3. Al-Asturlabi and as-Samaw'al on Scientific Progress. - Osiris. 9, 1950, 555-564.
4. New Fragments of as-Sarakhsi. - JAOS. 71, 1951, 141.
5. Al-Kindî and Ptolemy. - Studî orientalistici in onore di Giorgio Levi Della Vida. 2. Roma, 1956, 436-456.
6. Knowledge Triumphant. The Concept of Knowledge in Medieval Islam. Leiden, 1970.
7. Ibn Kutlubuulgha. - EI². 3, 1971, 848-849.
8. Ibn al-Daya. - EI². 3, 1971, 745-746.
9. Ibn al-Fuwati. - EI². 3, 1971, 769-770.
10. Ibn Khaldun. - DSB. 7, 1973, 321-323.
11. On Some Epistomological and Methodological Pre-suppositions of al-Bîrunî. - "al-Biruni" [11], 1974, 145-156.
12. The Classical Heritage in Islam. Transl. by Emile and Jenney Marmorstein. Leiden, 1974.
13. F. Rosenthal. Torzhestvo zhizni. Kontseptsiya znaníya v srednevekovom islame. Per. S.A.Khomutova. M., 1978.
14. Science and Medicine in Islam: a Collection of Essays. Aldershot, 1991.

Rosinska, Grazina (b. 1937)

1. Nasir al-Din al-Tusi and Ibn al-Shatir in Cracow? - Isis. 65, 1974, 239-243; "Ibn al-Shatir" [1], 1976, 122-126.

Ross E. D.

1. List of Arabic and Persian Manuscripts Acquired by the Asiatic Society of Bengal. Calcutta, 1908, 1911.

Ross, E. D. and Browne, E. G.

1. Catalogue of the Collections of the Persian and Arabic Manuscripts Preserved in the India Office Library. L., 1902.

Ross, E. D. and Gibb, A. R.

1. The Earliest Account of 'Umar Khayyam. - Bull. of the School of Oriental Studies. 5, 1929, 467-473.

Rossi, Ettore

1. Elenco dei manoscritti persiani della Biblioteca Vaticana. Citta di Vaticano. 1948 (Studi e testi, 136).

Rossi, G. D.

1. Dizionario storico degli nomini arabi più celebri e delle principali loro opere. Parma, 1807.

Rouanet, Jules.

1. La musique arabe. P., 1920.

Rousseau, J. L. (1783-1831)

1. Catalogue d'une collection de 500 manuscrits orientaux. P., 1817.

Roy, Sourin K.

1. Al-Biruni and Hindi Speculations on Gravitation. - "al-Biruni" [13], 1975, 218-223.

Rozhanskaya, Miriam [Mariam] Mikhaylovna (b. 1928)

1. O funktsional'nykh zavisimostyakh v "Kanone Masuda" al-Biruni. - Vestnik Kara-Kalpakskogp filiala AN Uzb. SSR. 1966, No 4, 14-21.
2. Metody issledovaniya obshchikh svoystv funktsiy v "Kanone Masuda" al-Biruni. - Vestnik Kara-Kalpakskogo filiala AN Uzb. SSR. 1967, No 1, 19-35.
3. Funktsional'nyye zavisimosti u al-Biruni. ADK (fm). M., 1967.
4. O kinematicheskikh issledovaniyakh na srednevekovom Vostoke. - ACIHS XIII (M., 1971), 3-4, 1974, 231-133.
5. Tradycja antyczna w mechanice sredniwecznego wschodu. - Kwartalnik historii nauki i techniki. 19, 1974, No 2, 393-400.
6. Albatenio. - SeT. 1, 1975, 30-31.
7. al-Biruni. - SeT. 1, 1975, 168.
8. Mekhanika na srednevekovom Vostoke. M., 1976.
9. Astronomicheskiye chasy al-Khazini. - IAI. 14, 1978, 294-309.
10. Ob istochnikakh po statike srednevekovogo Vostoka. - Tezisy dokladov III vsesoyuz. nauchnoy konf. po istorii fiz.-mat. nauk. Tbilisi, 1978, 89.
11. Ibn Sina kak mekhanik. - "Ibn Sina" [8], 1980, 163-183.
12. Mekhanika Ibn Siny. - "Ibn Sina" [12], 1981, 101-106.
13. O znachenii "Zija" al-Khorezmi v istorii astronomii. - "al-Khorezmi" [1], 1983, 192-212, 401.
14. Mesto "Zija" al-Khorezmi v istorii astronomii. - ONU. 1983, No 7, 50-59.
15. Istoriko-astronomicheskoye znacheniye "Zija" al-Khorezmi. - "al-Khorezmi" [4], 1985, 158-165.
16. O rekonstruktsii polnogo teksta traktata Beruni ob udel'nykh vesakh. - ONU. 1985, No 4, 47-51.
17. Mekhanika v Khorasane i Mawerannahre v sredniye veka (IX-X v.). - ADD (i). - Dushanbe, 1986.
18. On a Mathematical Problem in al-Khazini's Book of the Balance of Wisdom. - "From Deferent to Equant" [1], 1987, 427-435.
19. Wissenschaft und Staat in den Ländern des Islams im Mittelalter (IX-XV Jh.). - Materialy po istorii nauki i tekhniki. Studies on the History of Science and Technology. M., 1989, 118-119.
20. Abd ar-Rahman al-Khazini. M., 1992.
21. On reconstruction the complete text of al-Biruni's treatise on specific gravities (XI[th] c.). - ACIHS XX, 1997, 38.

Rozhanskaya, M. M. and Levinova, I. S.

1. Ob odnoy matematicheskoy zadache v "Knige vesov mudrosti" al-Khazini. - IMI. 21, 1976, 71-77.
2. Al-Khazini i yego "Kniga vesov mudrosti". - Nauchnoye nasledstvo. 6, M., 1982, 229-275.
3. Statics. - EHAS. II, 1996, 614-642.

Rozhanskaya, M. M. and Rosenfeld, B. A.

1. On al-Biruni's Densimetry. - "From Deferent to Equant" [1], 1987, 403-417.

al-Rudani (No 1176)

1. al-Naqiya `ala al-ala al-jami`a: L'astrolabe sphérique d'al-Rudani. Ed. Ch.Pellat. - Bull. d'Etudes Orientales. 26, 1974, 7-82.

Rudloff, G. and Hochheim, A.

1. Die Astronomie des Mahmud ibn `Omar al-Gagmînî. - ZDMG. 47, 1893, 213-275.

Rudzki, Jerzy

1. Al-Biruni - wszechstronny uczony renesansu islamu. - Matematyka, 34, 1981, No 4, 237-243.

al-Rumi (No 808)

1. Sharh al-Mulakhkhas al-Jaghmini. Kalkata, 1290 h. [1873].
2. Traktat ob opredelenii sinusa odnogo gradusa. Per. B.A.Rozenfel'da. - IMI. 13, 1960, 539-558.

Ruska, Julius (1867-1949)

1. Das Steinbuch aus der Kosmographie des Zakarijâ ibn Muhammed ibn Mahmud al-Qazwînî. Übersetzt und mit Anmerkungen versehen. - Jahresberichte 1895/96 der prov. Oberrealschule Kirchhain. Heidelberg, 1896; "Studies on al-Qazwini". 1, 1994, 221-264.
2. Kazwînî-Studien. - Der Islam. 4, 1913, 236-262; "Studies on al-Qazwini". 2, 1994, 70-150.
3. Über den falschen und den echten Qazwînî. - Mitt. zur Geschichte der Medizin und Naturwissenschaften. 13, 1914, 183-188; "Studies on al-Qazwini". 2, 1994, 151-156.
4. Zur ältesten arabischen Algebra und Rechenkunst. - Sitzungsberichte der Heidelberger Akad. der Wiss., philos.-hist. Klasse. 8, 1917.
5. Neue Bausteine zur Geschichte der arabischen Geographie. - Geogr. Zeitschr., 24, 1918, 77-78; "Islamic Geography", 1992, 304-308.
6. Zur Geschichte der arabischen Algebra und Rechenkunst. - Der Islam. 9, 1919, 116-117.
7. Arabische Texte über das Fingerrechnen. - Der Islam. 10, 1920, 87-119.
8. Al-Biruni als Quelle für das Leben und Schriften al-Razi's. - Isis. 5, 1922, 26-50.
9. Über Ursprung und Geschichte eines merkwürdingen Systems von Zahlzeichen. - AGNT. 9, 1922, 112-126.
10. Ueber das Schriftenverzeichnis des Ğabir und die Unechtheit einiger ihm zugeschriebenen Abhandlungen. - AGM. 15, 1923, 53-67.
11. Über den gegenwärtigen Stand der Razi-Forschung. - Archeion. 5, 1924, 335-340.
12. Arabische Alchemisten. 1-2. Hb., 1924.
13. Geschichte der Mathematik und der Naturwissenschaften (Literaturbericht). - Archiv für Kulturgeschichte. 16, 1926, 373-384.
14. Die 70 Bücher des Jabir ibn Hayyan. - Festgabe für E.O. von Lippmann. B., 1927, 38-47.
15. Über das Fortleben der antiken Wissenschaft im Orient. - AGMNT. 10. 1927, 112-135.

15a. Hunayn ibn Ishak. - EI. 2, 1927, 331.

15b. al-Kindi. - EI. 2, 1927, 1019-1021.

16. Zahl und Null bei Jabir ibn Hayyan. Mit einem Exkurs über Astrologie im Sasanidenreiche. - AGMNT. 11, 1928, 256-264.
17. Arabische Alchemie. - Archeion. 14, 1932, 425-435.
18. Banu Musa. - EI. 3, 1936, 741-742.
19. Masha'allah. - EI. 3, 1936, 390-391.
20. Thabit b. Qurra. - EI. 4, 1934, 733.
21. al-Tifashi. - EI. 4, 1934, 813.
22. Die Alchemie des Avicenna. - Isis. 21, 1934, 14-51.
23. Avicenna's Verhältnis zur Alchemie. B., 1934.
24. The History of the Jabir Problem. - Islamic Culture. 11, 1937, 303-312.
25. Al-Bîrunî's Steinbuch als Quelle einer Interpolation in Râzî's Buch der Geheimnisse. - Der Islam. 25, 1938, 191-193.
26. Pseudepigraphe Razis-Schriften. - Osiris. 7, 1939, 31-94.
27. Musâ Banî. - IA. 8, 1959, 660-661.
28. Sâbit b. Kurra. - IA. 10, 1966, 14-15.
29. Tîfâsî. - IA. 13, 1972, 263-264.

Ruska, J. and Hartner, W.

1. Katalog der orientalischen und lateinischen Originalhandschriften, Abschriften und Photokopien des Instituts für Geschichte der Medizin und der Naturwissenschaften in Berlin. - QSNM. 7, 1940, 155-303; "Handschriften" [2], 1, 1987, 347-496.

Ruska, J. and Hofmann, J. E.

1. Sopra un problema di geometria elementare in Abul Futuh. - Bolletino matematico Firenze. (3), 1, 1939, 1-11.

Ruska, J. and Kraus, P.

1. Der Zusammenbruch der Dschâbir-Legende. - Anhang zum 3. Jahresbericht des Forschungsinstituts für Geschichte der Naturwissenschaften. B., 1930, 9-42.

Russell, Gül A.

1. The Emergence of Physiological Optics. - EHAS. II, 1996, 672-715.

Rybakov, Boris Aleksandrovich (b. 1908)

1. Russkiye zemli na karte Idrisi 1154 goda. - Kratkiye soobshcheniya Instituta istorii material'noy kul'tury AN SSSR. 43, 1952, 3-44.

Rzayev, Alibaba Qasum oghlu.

1. Nasireddin Tusi. Politiko-pravovyye vozzreniya. Baku, 1983.

Saavedra, Eduardo

1. La geografia de España del del Edrisi. - Bol. de la Soc. Geogr. de Madrid. 10, 1881, 249-255, 376-387; 11, 1881, 102-115; 12, 1882, 46-54; 14, 1883, 81-91; 18, 1885, 224-242; 27, 1889, 166-181; "Studies on al-Idrisi". 1, 1992, 149-236.

al-Sabbagh, Mustafa Sa`id

1. Fihris makhtutat Dar al-kutub al-Zahiriyya. al-`ulum wa'l-funun mukhtalifa `inda'l-`arab. Dimashq, 1400 h. [1980].

al-Sabi' (No 253)

1. Thabat ma sannafa Abu'l-Hasan Thabit ibn Qurra al-Sabi' al-Harrani wa naqalahi wa aslahahi. - Ibn al-Qifti [1], 1903, 116-122.

al-Sabi' Hilal (970-1056)

1.Ustanovleniya i obychai dvora khalifov. Per., predisloviye i prim. I.B.Mikhaylovoy. M., 1983.

Sabirov, Mardan Ayub ughli (1909-1993) and Ahmedov, A.

1. O nekotorykh dostizheniyakh Beruniy v astronomii i matematike. - Nauch. trudy Tash. gos. universiteta. 460, 1974, 113-119.

Sabra, Abdelhamid Ibrahim (b. 1924)

1. "Burhan" Nasir al-Din al-Tusi `ala musadira Uqlidis khamisa. - Majalla kuliyya al-adab, Jami`a al-Iskandariyya. 13, 1959, 133-170.
2. Explanation of Optical Reflection and Refraction: Ibn-al-Haytham, Descartes, Newton. - ACIHS X (Ithaca, 1962), 1, 1964, 551-554.
3. Ibn al-Haytham's Criticism of Ptolemy's Optics. - J. of History of Philosophy. 4, 1966, 145-149.
4. The Authorship of the Liber Crepusculis, an Eleventh-century Work on Atmospheric Refraction. - Isis. 58, 1967, 77-85.
5. Thabit ibn Qurra on Euclid's Parallels Postulate. - J. of the Warbung and Courtauld Institutes. 31, 1968, 12-32.

5a. al-Farghani. - DSB. 4, 541-545.

6. The Astronomical Origin of Ibn al-Haytham's Concept of Experiment. - ACIHS XII (Paris, 1968). 3a. 1971, 133-136.
7. Simplicius's Proof of Euclid's Parallels Postulate. - J. of the Warburg and Courtauld Institutes. 32, 1969, 1-24.
8. Ibn al-Haytham. - DSB. 6, 1972, 189-210.
9. Al-Jauhari. - DSB. 7, 1973, 79-80.
10. The Physical and Mathematical in Ibn al-Haytham's Theory of Light and Vision. - Proceedings of Internat. Conf. of the History and Philosophy of Science. Jyvaskyla, 1973; ' 'al-Biruni" [12], II, 1976, 439-478..
11. Al-Nayrizi. - DSB. 10, 1974, 5-7.
12. Madkhal ila ta'rikh al-`ulum `inda al-`arab. An Introduction to the History of Arabic Sciences. - AH. 2, 1976, 9-30, 7-9.
13. The Exact Sciences. - GAC. 1976, 121-135.
14. The Sons of Musa bin Shakir (Banu Musa). - GAC. 1976, 136-137.
15. Abu 'Ali al-Hasan bin al-Hasan bin al-Haytham (Alhazen). - GAC. 1976, 138-139.
16. Abu al-Hasan Thabit bin Qurrah as-Sabi' al-Harrani. - GAC. 1976, 140-141.
17. The Islamic Scientific Enterprise. - Islam and the Arab World, N.Y., 1976, 181-200.
18. Ibn al-Haytham and the Visual Ray Hypothesis. - "The Ismaili Contributions in Islamic Culture". Tehran, 1977, 193-205.
19. Maqala al-Hasan ibn al-Hasan ibn al-Haytham fi'l-athar az-zahir fi wajh al-qamar. - JHAS. 1, 1977, No 1, 166-180.
20. A Note on Codex Biblioteca Medicea-Laurenziana, Or. 152. - JHAS. 1, 1977, No 2, 276-283.
21. The History of Arabic Science: Prospects and Problems. - ISHAS I. I, 1977. 58-79; II, 1978, 136-137.

22. Ibn al-Haytham's "Treatise on the Method of (Astronomical) Observations". - JHAS. 2. 1978, No 1, 155-156, 194-228.
23. al-Khwarazmi al-Katib. - EI². 4, 1978, 1068-1069.
24. Sensation and Inference in Alhazen's Theory of Visual Perception. - "Studies in Perception". 1978, 169-185.
25. An Eleventh-century Refutation of Ptolemy's Planetary Theory. - "Science and History". Studies in Honor of Edward Rosen. Wroclaw, 1978 (Studia Copernicana, 16), 117-131.
26. The Sources of Avicenna's Geometry. - JHAS. 4, 1980, No 2, 404-416.
27. Maqala al-Hasan ibn al-Haytham fi hall shukuk haraka al-iltifaf. Ibn al-Haytham's Treatise on Solution of Difficulties Concerning the Movement of Iltifaf. - JHAS. 3, 1979, No 2, 388-421.
28. Ibn al-Ḥaytham's Lemmas for Solving "Alhazen's Problem". - AHES. 26, 1982, No 4, 299-324.
29. Muqaddima al-muhaqqiq. - Ibn al-Haytham [12], I, 1983, 21-55.
30. The Andalusian Revolt against Ptolemaic Astronomy: Averroes and al-Bitruji. - "Transformation abd Tradition in the Sciences. Essays in honor of I.Bernard Cohen". Cambridge, 1984, 133-153.
31. The Appropriation and Subsequent Naturalization of Greek Science in Medieval Islam, a Preliminary Statement. - History of Science. 25, 1987, No 3, 223-243.
32. Psychology versus Mathematics: Ptolemy and Alhazen on the Moon Illusion. - "Mathematics and Its Applications". Cambridge, 1987, 217-247.
32a. Science, Islamic. - Dictionary of the Middle Ages. 11, 1988, 81-89.
33. Form in Ibn al-Haytham's Theory of Vision. - ZGAIW. 5, 1989, 115-140.
34. Manazir or `Ilm al-manazir. - EI². 6, 1990, 376-377.
35. Science and Philosophy in Medieval Islamic Theology. The Evidence of the Fourteenth Century. - ZGAIW. 9, 1994, 1-42.
36. Optics, Astronomy, and Logic. Aldershot, 1994.
37. On Seeing the Stars. II. Ibn al-Haytham's "Answers" to the "Doubts" Raised by Ibn Ma`an. ZGAIW. 10, 1995/96, 1-59.
38. Situating Arabic Science: Locality versus Essence. - Isis. 87, 1996, No 4, 654-670.

Sabra, A. I. and Heinen A.

1. On Seeing the Stars. Edition and Translation of Ibn al-Haytham's Fi Ru'yat al-kawakib. ZGAIW. 7, 1991/92, 31-50.

Sabra, `A. and Shahabi, N.

1. Al-Shukuk `ala Bitlimyus. al-Qahira, 1971.

Sacerdote, G.

1. Il trattato del pentagono e del decagono di Abu Kamil Shogia. - Festschrift zum 80. Geburtstage M.Steinschneiders. Lpz., 1896, 168-194.

Sachau, Eduard (1845-1930)

1. Algebraisches über das Schach bei Bîrûnî. - ZDMG. 29, 1876, 148-156.
2. Einleitung zur Chronologie orientalischer Völker von Alberûnî. - al-Biruni [1], 1878, VIII-LII.

Sachau, E. and Ethé, H.

1. Cataloque of the Persian, Turkish, Hindustani and Pashtu Manuscripts in the Bodleian Library. Ox., 1889.

Sachau, E. and Holetschek, J.

1. Eine Berechnung der Entfernung des Sonnenapogaeums von dem Frühlingspunkte bei Albîrûnî. Sitzungsber. der Kais. Akad. der Wiss., phil.-hist. Kl. Wien. 82, 1876, 243-266.

Sadallah, Abu'l-qasim

1. Quelques pratiques scientifiques en Algérie durant l'époque du retard scientifique (XV^e-XVIII^e s.). - "al-Multaqi" [1], 1986, 15-16.

Sa`di, `A.

1. Imam Ghazzali. - Inqilab. Tashkand, No 6, 1922, 25-29, No 7-8, 1922, 37-40, No 9-10, 1923, 150-156.
2. Abu'l-Nasr ibn Muhammad ibn Tarkhan Farabi. - Inqilab. Tashkand, 1924, No 11-12, 98-108.

Sa'di, Lutfi M.

1. A Bio-bibliograephical Study of Hunain ibn Ishaq al-`Ibadi (Johannitius). - Bull. of John Hopkins Hospital. 55. Suppl. 2, Baltimore, 1934, 409-446.
2. Ibn al-Haitham (Alhazen), Medical Scientist. - University of Michigan Medical Bull., 22, 1956, 249-273.

3. Ibn al-Haitham (Alhazen), ano 1026. Barcelona, 1957.

Sadiq, Sabih

1. al-Farabi wa atharuhu fi'l-fikr al-urubi. - "al-Farabi" [3], 1975, 109-138.

Sadiqi, J.

1. Hakim Nasawi. - Majalla-yi Danishkada-yi Adabiyat. 6, 1958, 12-28.

Sadritdinova, Zul'fiya Israilovna

1. Al-Khorezmi i vostochnye uchebniki po arifmetike v X-XVI vv. - "Al-Khwarizmi" [4], 1985, 269-270.
2. Algebra v sisteme tochnykh nauk srednevekovogo Blizhnego i Srednego Vostoka. - ADK(fm), Tash., 1994.

Sadyqov, Abduhamid Ul'mas ughli

1. Struktura i soderzhaniye "Kitab as-Siyasa al-amadaniya" - Vostochnaya filologiya. 2, Dushanbe, 1973, 94-101.
2. "Politika" Abu Nasra al'- Farabi. - ADK (fl). M., 1974.

Sadyqov, Abid Sadyq ughli

1. K voprosu o vozniknovenii khimii v Sredney Azii (IX-XII). Materialy po istorii otechestvennoy khimii. M.-Lg., 1950.
2. Abu Ali ibn Sina i razvitiye yestestvennykh nauk. - Voprosy filosofii. 1980, No 7, 54-61.
3. Ibn Sina - yestestvoved. - "Ibn Sina" [12], 1981, 8-17.
4. Al-Khorezmi - epokha, zhizn' i trudy. - "al-Khwarizmi" [4], 1985, 8-13.

Sadyqov [Sodyqov], Hashim Umar zoda

1. Biruni i yego astronomicheskiye raboty. - Astronomicheskiy Zhurnal. 27, No 2, 1950, 73-80.
2. Astronomicheskoye ucheniye Biruni. - "al-Biruni" [1], 1950, 74-87.
3. Biruni hamchun astronom. Stalinabad, 1952.
4. Al-Biruni i yego raboty po astronomii i matematicheskoy geografii. M., 1953.
5. Velikiy astronom XI veka Abu-Rayhan Biruni. Stalinabad, 1956.
6. Beruni. Stalinabad, 1957.
7. Razvitiye yestestvennoy nauki v Srednevekovom Vostoke na primere trudov uchonykh-mysliteley tajikskogo naroda. - Vostochnaya filologiya. I. Dushanbe, 1973, 128-147.

Safa, Zabihulla

1. Sargudhasht wa ta'lifat wa ash'ar wa ara-yi Ibn-i Sina. I. Tehran, 1331 s.h. [1951].
2. Ta'rikh-i 'ulum-i 'aqli dar tamaddun-i islami ta awasit-i qarn-i panjum. Tehran, 1331 s.h. [1952].
3. Tahrirat-i Khwaja Nasir al-Din Tusi. - "al-Tusi" [2], 1957, 152-165.
4. Al-Biruni. Akhwal u athar-i Abu Rayhan al-Biruni. Ses œuvres et ses pensées. Teheran, 1973; 'al-Biruni" [12], II, 1976, 1-35.
5. Abu Rayhan Biruni wa hazara-yi u. Tehran, 1352 s.h. [1973].

Safarov, Rajab Sattar zoda

1. Nekotoryye predlozheniya traktata al-Sijizi "Ob izmerenii sharov sharami" - TNKA. XXIII-XXVI(m), 1986, 193-203.

Saghadeyev, Artur Vladimirovich

1. Iz istorii eticheskoy mysli narodov Blizhnego i Srednego Vostoka (epokha srednevekov'ya). ADK(fs). M., 1964.
2. Novyye publikatsii traktatov al-Kindi. - Narody Azii i Afriki. 1964, No 1, 168-179.
3. Ibn Rushd (Averroés). M., 1973.
4. Ucheniye Ibn Rushda o sootnoshenii filosofii, teologii i religii i yego istoki v trudakh al-Farabi. - "al-Farabi" [1], 1975, 120-144.
5. Filosofy al-Andalusa XI-XII vv. M., 1977.
6. "Znaniye" i poznavatel'noye otnosheniye k deystvitel'nosti v srednevekovoy musul'-manskoy kul'ture. - Rosenthal [13], 1978, 3-18.
7. Ibn Sina (Avitsenna). M., 1980, 1985.
8. Ot Avitsenny k Ibn Sine: opyt adekvatnoy rekonstruktsii vostochnoperipateticheskoy mysli. - "Ibn Sina" [8], 1980, 91-108.
9. Ibn Tufayl's Philosophical Robinsonade. - "Muslim Philosophy in Soviet Studies". New Dehli, 1981, 29-48.

10. Ibn Rushd's Theory of the Relationship between Philosophy, Theology and Religion, and his Sources in Al-Farabi's Work. - "Muslim Philosophy in Soviet Studies". New Dehli, 1981, 49-69.
11. Bahmanyar al-Azerbayjani i yego entsiklopedicheskiy trud "al-Tahsil". - Bahmanyar [2], 1983, 3-16.
12. Artur Saghadiyif. "Rubinsunada" Ibn Ṭufayl al-falsafiyya. - "al-Turath al-falsafi", 1987, 66-85.
13. Artur Sa`diyiif. Lafz s. d. b. "Qissa Hayy ibn Yakzan" li-Ibn Tufayl fi siyaq al-thaqafatayn al-islamiyya wa'l-urubiyya. - AJ. 4, 1989, 56-77.

al-Saharanfuri (No 1171)

1. Anwar al-Khulasa al-hisab. Kalkata, 1245 h. [1829].

Sa'id, Hakim Muhammed

1. Pish lafz. - Ibn al-Haytham [7], 1969, 5-13.
2. Ibn al-Haitham - Father of Optics. Life and Works with Special Reference to Kitab al-Manazir. - ACIHS XIV (Tokyo, 1974). 2, 1975, 76-79.
3. Al-Tibb al-Islami. - Hamdard. 19, No 1-6, 1976, 1-119.
4. "Father" of Arabic Pharmacy in Medieval Islam. - Hamdard, 20, No 7-12, 1977, 41-44.
5. Jabir ibn Hayyan. - ISHAS 1. I, 1977, 215; II, 1978, 138-144.

Said, Hakim Mohammed and Khan, Ansar Zahil

1. Al-Biruni: His Time, Life and Works. Karachi. 1981.

al-Said, Mansur Sulayman

1. Medicine in Islam. - ENWC. 1997, 695-698.

Said Khan, Ahmad

1. The Bibliography of al-Biruni. New Delhi, 1971.
2. The Bibliography of al-Biruni. Transl. by Abdolhayy Habib. Tehran, 1352 s.h. [1973].

Said, S. S. and Stefenson F. R.

1. Precision of Medieval Islamic Measurements of Solar Altitudes and Equinox Times. - JHA. 26, 1995, No 2, 117-132.
2. Solar and Lunar Eclipse Measurements by Medieval Muslim Astronomers. I. Background. - JHA. 27, 1996, No 3, 259-273.
3. Solar and Lunar Eclipse Measurements by Medieval Muslim Astronomers. II. Observations. - JHA. 28, 1997, No 1, 29-48.

Sa`idan [Saidan], Ahmad Salim (1914-1990)

1. Hawla rasail al-Biruni. - MMMA. 6, 1960, 307-312.
2. The Rasa'il of Biruni and Ibn Sinan. A Rearrangement. - Islamic Culture. 34, 1960, 173-175.
3. Al-Usul al-ighriqiyya li'l-`ulum al-riyad`iyya `inda'l `arab. - MMMA. 7, 1961, 81-110.
4. Tara'if al-hisab li-Abi Kamil Shuja` ibn Aslam al-Misri. - MMMA. 9, 1963, 291-320.
5. The Development of Hindu-Arabic Arithmetic. - Islamic Culture. 39, No 3, 1965, 209-221; Thesis, Khartoum.
6. The Earliest Extant Arabic Arithmetic Kitab al-Fusul fi al-Hisab al-Hindi of Abu al-Hasan Ahmad ibn Ibrahim al-Uqlidisi. - Isis. 57, 1966, 475-490.
7. Jawami` al-hisab bi'l-takht wa'l-turab . - Al-Abhath. 20, 1966, 91-163, 213-292.
8. Risalatan fi'l-hisab al-`arabi. - MMMA. 13, 1967, 41-158.
9. Finger Reckoning in an Arabic Poem. - The Math. Teacher. 61, 1968, 707-708.
10. Ta'rikh `ilm al-hisab al-`arabi. Al-juz' al-awwal. Hisab al-yad. Tahqiq li-kitab al-Manazil al-sab` li-Abi'l-Wafa al-Buzjani ma` muqaddima wa dirasa bi'l-muqarina bi-kitab al-Kafi fi'l-hisab li-Abi Bakr al-Karaji al-Hasib. Bi-qalam al-duktur Ahmad Salim Sa`idan. Arabic Arithmetic. The Arithmetic of Abu al-Wafa` al-Buzajani, 10[th] Century, MSS or. 103 Leiden & 42 M Cairo. Ed. with Introduction, Commentaries and Ample Reference to the Arithmetic of al-Karaji, 11[th] Century, Ms 855 Istanbul by Dr. A.S.Saidan. Amman, 1399 h. [1971].
11. `Ilm al-hisab `inda'l-`arab. - `Alam al-fikr. Kuwayt. 1399 h. [1971].
12. Kushyar. - DSB. 7, 1973, 531-533.
13. Ta'rikh `ilm al-hisab al-`arabi. Al-juz' al-al-thani. Al-fusul fi l-hisab al-Hindi li-Abi l-Hasan Ahmad ibn Ibrahim al-Uqlidisi. - al-Amman, 1392 h. [1973].
14. al-Nasawi. - DSB. 9. 1974, 614-615.
15. The Arithmetic of Abu'l-Wafa. - Isis. 65, 1974, 367-374.

16. al-Qalasadi. - DSB. 11. 1975, 229-230.
17. al-Umawi, Ya`ish al-Andalusi. - DSB. 13, 1976, 539-540.
18. al-Uqlidisi. - DSB. 13, 1976, 544-546.
19. The Arithmetic of al-Uqlidisi. The Story of Hindu-Arabic Arithmetic as Told in Kitab al-Fusul fi al-Hisab al-Hindi Written by Abu'l-Hasan Ahmad ibn Ibrahim al-Uqlidisi, Written in Damascus in the Year 341 (A.D. 952/3). Dordrecht-Boston, 1977; Halab, 1405 h. [1985].
20. Number Theory and Series Summation in Two Arabic Texts. - ISHAS 1. 1, 1977, 217; II, 1978, 145-163.
21. Kitab al-a`dad al-mutahabba li-Thabit ibn Qurra. Amman, 1397 h. [1977].
22. Kitab tastih al-suwar wa tabtih al-kuwar li-Abi'l-Rayhan al-Biruni al-mutawaffa sana 440 H. - Dirasat Majalla `ilmiyya tasdir `an al-Jami`a al-Urduniyya, 4, 1397 h. [1977], No 1-2, 7-22.
23. Hawla khawass al-a`dad li-Abi Ja`far Muhammad ibn al-Husayn. Nazariyya al-muthallathat al-`adadiyya li-Abi Ja`far al-Khazin. Dirasat Majalla `ilmiyya tasdir `an al-Jami`a al-Urduniyya, 5, 1398 h. [1978], No 2, 7-49.
24. al-Baghdadi. - DSB. 15, 1978, 9-10.
25. Magic Squares in an Arabic Manuscript. - JHAS. 4, 1980, No 1, 87-89.
26. Marasim al-intisab fi ma`alim al-hisab li-Ya`ish ibn Ibrahim al-Umawi. - Halab, 1401 h. [1981].
27. Namudhajan min al-mantiq al-riyadi `inda al-`Arab. - Majalla majma` al-lugha al-`arabiya al-Urduni, 15-16, 1402 h. [1982], 137-154.
28. Muqaddima al-muhaqqiq. - Ibn Sinan [4], 1403 h. [1983], 9-16.
29. Qissa al-arqam wa'l-tarqim. Amman, 1403 h. [1983].
30. Ta'rikh `ilm al-hisab al-`arabi. Al-juz' al-thalith. Al-hisab fi'l-Andalus wa'l-Maghrib. Amman, 1304 h. [1984].
31. Tathlith al-zawiya fi'l-usur al-Islamiyya. - MMMA. 28, 1984, 99-137.
32. Al-Takmila fi'l-hisab li-`Abd al-Qahir ibn Tahir al-Baghdadi ma` risala lahu fi'l-misaha. Kuwait, 1405 h. [1985].
33. Ta'rikh `ilm al-jabr fi'l-`alim al-`arabi. Dirasa muqarana ma`a tahqiq li-ahamm kutub al-jabr al-`arabiyya. 1. Algebra in Eastern Islam, Study Built upon al-Fakhri of al-Karaji. 2. Algebra in Western Islam, Study of Ibn Badr and Ibn al-Banna'. Kuwait, 1986.
34. The Takmila fi'l-hisab of al-Baghdadi. - "From Deferent to Equant" [1], 1987, 437-443.
35. Muqaddima li- ta'rikh al-fikr al-`ilmi fi'l-Islam. Kuwait, 1408 h. [1988].
36. Al-Biruni on Trigonometry. - Erdem, 6, 1990.
37. Handasa Uqlidis fi aydin `arabiyya. Amman, 1411 h. [1991].
38. al-Riyyadiyyat bayna al-mashriq wa'l-maghrib al-islamiyyain. Mathematics between Muslim East and West.- "al-Multaki" [2], 1995, 7-23.
39. Numeration and Arithmetic. - EHAS. II, 1996, 331-338.

Saidov, Mahomed Seyyid (1902-1985)

1. Dagestanskaya literatura XVIII-XIX vv. na arabskom yazyke. - Trudy XXV Mezhdunar. kongressa vostokovedov (M., 1960). 2, M., 1963, 118-123.

Sajadi, Sayyid Ja`far

1. Abu Rayhan danishmand-i Irani wa buzurgtarin nabigha-yi jihan. - "al-Biruni" [10], 1973, 292-345.

al-Sajawandi (No 527)

1. Sirajiyya. Qazan, 1302 h. [1885].
2. Serajiyyah, the Mohammedan Law of Inheritance, Transl. by Prasanna Kumar Sen. Serampore, 1885.
3. Al Sirajiyyah, or the Muhammedan Law of Inheritance, Transl. by J.W.Jones. Ed. A.Ramsey. L., 1869; 1890.

Sakr, `Abd al-Badi` and A`zami, Muhammad Mustafa

1. Makhtutat Dar al-kutub al-Qatariyya. - MMMA. 9, 1963, 3-46.

Salam, Hala and Kennedy, E. S.

1. Solar and Lunar Tables in Early Islamic Astronomy. - JAOS. 87, 1967, No 4, 492-497; "Kennedy" [1], 1983, 108-113.

al-Salar (No 593)

1. Predposylki dlya dokazatel'stva postulata o parallel'nykh liniyakh, privedennogo Yevklidom v nachale pervoy knigi. Per. i prim. B.A.Rosenfelda i N.G.Khayretdinovoy. - IMI. 19, 1974, 285-293.

Salat, P.

1. Life of Omar Khayyam. P., 1927.

as-Saleh, Jamil Ali

1. Solar and Lunar Distances and Apparent Velocities in the Astronomical Tables of Habash al-Hasib. - al-Abhath. 23, 1970. 129-177; "Kennedy" [1], 1983, 204-252.

Salem, Sema'an I.

1. Sa`id al-Andalusi. - ENWC. 1997, 875-876.

Salemann, Carl (1849-1916)

1. Das Asiatische Museum im Jahre 1890. - Mélanges Asiatiques tirés du Bull. de l'Acad. Imp. des sciences de St.-Pétersburg. 10. 1892, No 2, 272-292.
2. Zur Handschriftenkunde. I. Al-Biruni's al-A'thar al-baqiyah. - Bull. de l'Acad. Imp. des sciences de St.-Pétersbourg. (6), 14, 1912, 861-870.

Salemann, C. and Rosen, V.

1. Indices alphabetici codicum manuscriptorum Persicorum Turcicorum Arabicorum qui in bibliotheca Imperialis literarum Universitatis Petropolitanae abservantur. Petropoli, 1888. Spisok persidskim, turetsko-tatarskim i arabskim rukopisyam I[mp.] SPb. Universiteta. SPb., 1888. - Zapiski kollegii vostokovedov pri Aziatskom Muzeye Akad. nauk. 2, 1887, 241-262, 3, 1888, 197-222.

Saliba, George [Jirjis] A. (b. 1939)

1. The Meaning of al-jabr wa'l-muqâbalah. - Centaurus.17, 1972, 189-204; "Kennedy" [1], 1983, 544-559.
2. The Double Argument Lunar Tables of Cyriacus. - JHA. 7, 1976, 41-46.
3. Computational Techniques in a Set of Late Medieval Astronomical Tables. - JHAS. 1, 1977, No 1, 24-32; ISHAS 1. I, 1977, 275-294; II, 1978, 164.

3a. The Planetary Tables of Cyriacus. - JHAS. 2, 1978, No 1, 53-65.

4. Islamic Reaction to Greek Astronomy. - Proceedings of the Boston Colloquium for the Philosophy of Science. 1978,
5. Biruni and Bar Shinaya. - "al-Biruni" [9], 1979, 251-259.
6. The Original Source of Qutb al-Din al-Shirazi's Planetary Model. - JHAS. 3, 1979, No 1, 3-18.
7. The First Non-Ptolemaic Astronomy at the Maragha School. - Isis. 70, 1979, No 254, 571-576.
8. Damascene Astronomer Was the First to Offer the Alternative to Ptolemy's Astronomy. Jurj Saliba. Falaki min Dimashq kana awwal min radd `ala hay'a Biṭlimyus. - ISHAS 2, 1979, 72a, Suppl. 28.
9. Falaki min Dimashq yariddu `ala hay'a Biṭlimyus. - JHAS. 4, 1980, No 1, 220-234.
10. Ibn Sina and Abu `Ubayd al-Juzjani: The Problem of the Ptolemaic Equant. - JHAS. 4, 1980, No 2, 376-403.
11. The Development of Astronomy in Medieval Society. - Arab Studies Quaterly, 4, 1982, 211-225.
12. An Observational Notebook of a Thirteenth Century Astronomer. - Isis. 74, 1983, 388-401.
13. Arabic Astronomy and Copernicus. - ZGAIW. 1, 1984, 73-87.
14. The Determination of the Solar Eccentricity and Apogee according to Mu'ayyad al-Din al-`Urdi (d. 1266 A. D.). - ZGAIW. 2, 1985, 47-67.
15. Solar Observations of the Maragha Observatory before 1275: a New Set of Parameters. - JHA. 16, 1985, 113-122.
16. The Height of the Atmosphere according to Muayyad al-Din al-`Urdi, Quṭb al-Din al-Shirazi, and Ibn Mu`adh. - "From Deferent to Equant" [1], 1987, 445-465.
17. The Role of the Almagest Connentaries in Medieval Arabic Astronomy: a Preliminary Survey of Tusi's Redaction of Ptolemy's Almagest. - AIHS. 37, 1987, No 118, 3-20.
18. Theory and Observation in Islamic Astronomy: the Work of Ibn al-Shaṭir of Damascus. - JHA. 18, 1987, No 1, 31-43.
19. A Medieval Arabic Reform of of the Ptolemaic Lunar Model. - JHA. 20, 1989, No 3, 157-164.
20. Biruni, Mathematics and Astronomy. - EIr. 4, 1989, 277-279.
21. Al-Biruni and the Science of His Time. - The Cambridge History of Arabic Literature. Cambridge, 1990, 405-423.
22. The Astronomical Tradition of Maragha: A Historical Survey and Prospects for Future Research. - ASP. 1, 1991, No 1, 67-100.
23. A Sixteen-century Arabic Critique of Ptolemaic Astronomy: the Work of Shams al-Din al-Khafri. JHA. 25, 1994. No 1. 15-38.

24. Early Arabic Critique of Ptolemaic Cosmology: a Ninth-century Text on the Motion of the Celestial Spheres. JHA. 25, 1994, No 2, 115-141.
25. A History of Arabic Astronomy. Planetary Theories during the Golden Age of Islam. N.Y.. 1994.
26. Arabic Planetary Theories after the Eleventh Century A.D. - EHAS. I, 1996, 58-127.
27. Arabic Science and the Greek Legacy. - "From Baghdad to Barcelona" [1]. I, 1996, 19-37.

Saliba, G. and Kennedy, E.S.

1. The Spherical Case of the Tusi Couple. - ASP. 1, 1991, No 2, 285-299.

Salibi, Jamil [Salibi, Djemil]

1. Etude sur Métaphysique d'Avicenne. P., 1926.
2. Ibn Sina. Dimashq, 1937.

Sal'ye, Mikhail Aleksandrovich (1899-1961)

1. "Ozherel'e golubki" i yego avtor. - Ibn Hazm [4], 1933, 7-44.
2. Velikiy khorezmiysky uchonÿy Abu'l-Rayhan al'-Biruni (973-1048). - Zvezda Vostoka, 1950, No 6, 65-74.
3. Muhammed ibn Musa al'-Khorezmi - velikiy uzbekskiy uchonyy. Tash., 1954.
4. Ob osveshchenii tak nazyvaemoy "arabskoy kul'tury" v Sredney Azii. - Trudy Instituta vostokovedeniya AN Uz. SSR. 3, 1954, 5-24.
5. Khorazmlik ulugh olim Abu Rayhon Muhammad ibn Ahmad al-Biruniy (ijadiy hayot yulini yoritishdagi tajriba). Toshkent, 1960.
6. Nauchnyye itogi perevoda "Kanona vrachebnoy nauki" Abu Ali ibn Siny na russkiy i uzbekskiy yazyki. - ONU. 1960, No 4, 51-56.

al-Samarqandi (No 655)

1. Ashkal al-ta'sis. Istanbul, 1268 h. [1852], 1273 h. [1857].

al-Samarra'i, `Amir Rashid and al-`Aluchi, `Abd al-Hamid

1. Athar Hunayn ibn Ishaq. Baghdad, 1394 h. [1974].

al-Samaw'al (No 487)

1. Epistola Rabbi Samuelis ad Rabbi Isaac de vana judaeorum spe in venturum sibi Messiam. Ex Arabicum in Latinum. Norimbergae, 1498; Treviris, 1833.
2. The Blessed Jew of Morocco, or the Black Moor who turned white. York, 1649.
3. Zlatoye sochineniye Samuila Marokskogo, ravvina Iudeyskogo, zaklyuchayushcheesya v pis'makh k Isaaku, ravvinu Kordubskomu, na oblichenie Iudeyskogo zabluzhdeniya v nablyu-denii Moiseyskogo zakona i ozhidanii Messii, yakoby yeshche ne prishedshego. Per. Varlaama Glowatskogo. SPb, 1779, 1782, 1789; M., 1827, 1837; Kiyev, 1855.
4. Samau'al al-Maghribi. Ifham al-yahud. Silencing the Jews. Ed. and transl. by M. Perlmann. - Proceedings of the American Academy for Jewish Research, 32, 1964.
5. al-Samaw'al al-Maghribi. al-Bahir fi'l-hisab. Tahqiq wa tahlil Salih Ahmad, Rushdi Rashid. Dimashq, 1392 h.; Al-Bahir en Algebre d'As-Samaw'al. Edition, notes et introduction par Salah Ahmad, Roshdi Rashed. Damas, 1972.

Samian, Abdul Lâtif

1. Al-Biruni (Mathematics and Astronomy). - ENWC. 1997, 157-158.

Samso Moya, Julio (b. 1942)

1. Nota acerca de cinco manuscritos sobre astrolabio. - Al-Andalus. 31, 1966, 385-392.
2. Estudios sobre Abu Nasr Mansur b. `Ali b. `Iraq. Barcelona, 1969.
3. Contribucion a un analisis de la terminologia matematico-astronomica de Abu Nasr Mansur b. `Ali b. `Iraq. - Pensamiento. 25, 1969, 235-248.
4. En torno al Arquimedes Arabe: el testimonio de al-Biruni. - Al-Andalus. 36, 1971, 384-390.
5. A propos de quelques manuscrits astronomiques des bibliothèques de Tunis: Contribution à une étude de l'astrolabe dans l'Espagne Musulmane. - II Coloquio Hispano-Tunecino. (Tunis, 1972). Madrid, 1973, 171-190.
6. Mansur ibn `Ali ibn `Iraq. - DSB. 9, 1974, 83-85.
6a. En torno al "Collar de la paloma" y la medicina. - Al-Andalus. 40, 1975, 213-219.
7. De nuevo sobre la traduccion arabe de las "Phaseis" de Ptolomeo y la influencia clasica en los "Kutub al-Anwa' ". - Al-Andalus. 41, 1976, 471-479.

8. A Homocentric Solar Model by Abu Ja'far al-Khazin. - ACIHS XV (Edinburgh, 1977), 1977, 42; JHAS. 1, 1977, No 2, 268-275.
9. al-Bitruji. - DSB. 15, 1978, 33-36.
10. The Early Development of Astrology in al-Andalus. - JHAS. 3, 1979, No 2, 228-243.
11. Maslama al-Majriti and the Alphonsine Book on the Construction of the Plane Astrolabe. - JHAS. 4, 1980, No 1, 3-8.
12. Alfonso X y los origenes de la astrologia hispanica. - "Historia" [1], 1980, 81-114.
13. Tres notas sobre astronomia hispanica en el siglo XIII. - "Historia" [1], 1980, 165-180.
14. Notas sobre la trigonometria esferica de Ibn Mu'ad. - Awraq, 3, 1980, 60-67.
15. Instrumentos astronomicos. - "Historia" [2], 1981, 97-126.
16. Calendarios populares y Tablas astronomicas. - "Historia" [2], 1981, 127-162.
17. Notas sobre el ecuatorio de Ibn al-Samh. - "Nuevos estudios", 1983, 105-118.
18. Sobre los materiales astronomicos en el Calendario de Cordoba y en su version latina del siglo XIII. - "Nuevos estudios", 1983, 125-138.
19. al-Khujandi. - EI^2. 5, 1986, 46-47.
20. Al-Zarqal, Alfonso X and Peter of Aragon on the Solar Equation. - "From Deferent to Equant" [1], 1987, 467-476.
21. Sobre el modelo de Azarquiel para determinar la oblicuidad de la ecliptica. - Homenaje al Prof. Dario Cabanelas o.F.M. con motivo de su LXX aniversario, 2. Granada, 1987, 367-377.
22. Ğabir ibn Aflah. - LM. 4, 1988, 1071.
23. Marsad. - EI^2. 6, 1990, 599-602.
24. Masha'allah. - EI^2. 6, 1990, 710-712.
25. Ibn Mu'ad. - LM. 5, 1990, 319.
25a. Sobre Ibn Bayya y la astronomia. - Sharq al-Andalus. 10-11, 1993-1994, 669-681.
26. Islamic Astronomy and Medieval Spain. Aldershot, 1994.
27. Le due astronomie dell'Occidente musulmano (1215-1250). - "Federigo II e le scienze". Palermo, 1994, 204-221.
28. "al-Biruni" in al-Andalus. - "From Baghdad to Barcelona" [1]. II, 1996, 583-612.
29. Al-Battani. - ENWC. 1997, 152.
30. Al-Bitruji. - ENWC. 1997, 160.
31. Ibn al-Ha'im. - ENWC. 1997, 405.
31a, Ibn al-Kammad. - ENWC. 1997, 408-409.
32. Ibn al-Raqqam. - ENWC. 1997, 412.
33. Ibn Ishaq al-Tunisi. - ENWC. 1997, 420.
34. Al-Khazini.- ENWC. 1997, 480-481.
35. Astronomical observations in the Maghrib in the fourteenth and fifteenth centuries.- Sci. Context, 14, 2001, No 1-2, 165-178.
36. Ibn al-Haytham and Jābir b. Aflaḥ's Criticism of Ptolemy's Determination of the Parameters of Mercury.- Suhayl, 2, 2001, 199-225.

Samsó, J. and Catala, M. A.

1. Un instrumento astronomico de raigambre Zarqali: el cuadrante sakkazi de ibn Tibuga. - Memorias de la Real Acad. de Buenas letras de Barcelona. 13, 1971, No 1, 5-31.

Samsó, J. and Comes, Mercé

1. Al-Sufi and Alfonso X. - AIHS. 38, 1988, No 120, 67-76.

Samsó, J. and Mielgo, Honorino

1. Ibn al-Zarqalluh on Mercury. - JHA. 25, 1994, 289-296.

Samsó, J. and Millas, Eduardo

1. Ibn al-Banna' and al-Zarqalluh Solar Theory. - ACIHS. XVIII, 1989, P2, 15.

Samsó, J. and Rodrigues, Blas

1. Las "Phaseis" de Ptolomeo y el "Kitab al-Anwa'" de Sinan b. Tabit. - Al-Andalus. 41, 1976, No 1, 15-48.

Sanches Pérez, José Antonio (1882-1958)

1. Compendio de algebra de Abenbéder. Texto arabo, traduccion y estudio. Madrid, 1916.
2. Biografias de matematicos arabes que florecieron en Espana. Madrid, 1921.

Sandubi, Hasan

1. Adab al-Jahiz. al-Qahira, 1350 h. [1931].

Sanguinetti, Beniamin Raphael (1811-1883)

1. Extraits de l'ouvrage Arabe d'Ibn Abu Ossaibi'ah sur l'Histoire des médecins. Trad. franç. accomp. de notes. - JA (5). 3, 1854, 230-291; 4, 1854, 173-213; 5, 1855, 401-469; 6, 1855, 129-190; 8, 1856, 175-196, 316-353.

Sani, Modiah

1. The Life and Work of al-Khwarizmi. - Mememui Matematika. 4, 1982, No 1, 1-9.

Sansur, Antun Yusuf

1. Matematika v astronomicheskikh, mekhanicheskikh i filosofskikh traktatakh Sabita ibn Korry. - TNKA. XIV(m). 1971, 17-25.
2. Matematicheskiye trudy Sabita ibn Korry. ADK (fm). M., 1971.

Sansur, A. Yu. and Bokatuyeva [Krasnova] S. A.

1. Novyye issledovaniya o matematicheskom tvorchestve Sabita ibn Korry. - ACIHS XIII (M., 1971), 3-4, 1974, 99-103.

Sarfaraz, Khan Bahadur Shaikh 'Abdul-Kadir

1. Descriptive Catalogue of the Arabic, Persian and Urdu Manuscripts in the Library of University of Bombay. Bombay, 1935.

Sarma, K. V.

1. Precession of Equinoxes. - ENWC. 1997, 827.

Sarma, Sreeramula Rajeswara

1. An Unpublished Manuscript on Arab Astronomical Instrument Attributed to Maharaja Sawai Jai Singh II. - SHMS. 9, 1985, No 1-2, 75-83.
2. Astronomical Instruments in Mughal Miniatures. - ACIHS XVIII, 1989, P1, 17.
3. The Safiha Zarqaliyya in India. - "From Baghdad to Barcelona" [1]. II, 1996, 719-735.

al-Sarraf, Ahmad Hamid

1. `Umar Khayyam al-Hakim al-Falaki al-Nishapuri. Baghdad, 1949.

Sarton, George (1884-1956).

1. Introduction to the History of Science. 1-3. Baltimore, 1927-1948; 1945-1948, 1950, 1953, 1968, 1975 (IHS).
2. The Tradition of the Optics of Ibn al-Haitham. - Isis. 29, 1938, 403-406.

Sasaki, Eiichi

1. L'atomisme islamique et pensée scientifique. - ACIHS XIV (Tokyo, 1974), 3, 1975, 343-346.

Sastri, P. P. Subrahmanya

1. A Descriptive Catalogue of the Islamic Manuscripts in the Government Oriental Manuscripts Library at Madras. 1. Madras, 1939.

Saud, Mohammad

1. The Place of Ibn al-Haitham in the History of Science. - "Ibn al-Haytham" [1], 1970, 59-69.
2. The role of Hypothesis in Ibn al-Haytham's Scientific Investigation. - ISHAS 2, 1979, 127-128.
3. A Part of al-Biruni's Istikhraj al-Autar fi al-Dairah. - al-Biruni [9], 1979, 691-705.
4. Recognition of Mathematical Aspect of Science by ibn al-Haytham. - AH. 4-5, 1979-1980, 87-92, 160-163.

Sauvaire, Henri (d. 1891)

1. Arab Metrology. I. On a Treatise on Weights and Measures by Eliyâ. - JRAS. 9, 1877, 291-313.
2. Arab Metrology. II. El-Djabarty. - JRAS. 10. 1878, 253-384.

Savage-Smith, Emilie

1. Globes. - ENWC. 1997, 383-384.
2. Maps and Mapmaking: Celestial Ismic Maps. - ENWC. 1997, 565-567.

el'-Sayed (al-Sayyid) Mohammed, Leyla

1. Algebra al-Karaji. ADK (fm). M., 1975.
2. Neopredelennyye uravneniya vtoroy stepeni u al-Karaji. - Problemy istorii mate-matiki i mekhaniki. 2, 1975. 90-93.
3. O "Dostatochnoy knige" al-Karaji. - IMEN. 20, 1978, 111-121.
4. Otritsatel'nye chisla u al-Karaji. - IMEN. 25, 1980, 115-120.

Sayfullayev, H. M.

1. Nekotopyye voprosy logiki Abuali Ibn-Siny. - IAN Taj. SSR, otd. obshch. nauk. No 2, 1979, 48-58.
2. Teoriya suzhdeniy Ibn Siny. - IAN Taj. SSR, otd. obshch. nauk. 1980, No 3. 20-24.
3. O logike Ibn Sina. - "Ibn Sina" [16], 1981, 59-85.

Saygun, Adnan

1. La musique turque.- "Histoire de la musique", 1960, 572-617.

Sayılı, Aydın (1913-1993)

1. Al-Qarafi and his Explanation of the Rainbow. - Isis. 32, 1940, 16-26.
2. Gazan Han Rasathanesi. - TTKB. 10, 1946.
3. Higher Education in Medieval Islam. - Annales de l'Université d'Ankara. 2, 1948.
4. Bîrûnî. - TTKB. 13, 1949.
5. Fârâbî ve tefekkür tarihindeki yeri. - TTKB. 15, 1951, 1-64.
6. Fârâbî'nin simyanın lüzumu hakkındaki risâlesi. Al-Fârâbî's Article on Alchemy. - TTKB. 15, 1951, 65-79.
7. Fârâbînin halâ hakkındaki risâlesi. Al-Fârâbî's Article on Vacuum. - TTKB. 15, 1951, 123-174.
8. Fârâbî ve ilim. - AÜDFD. 8, 1951, No 4, 437-440.
9. Habeş el Hasib'in "El Dimişki" adıyla maruf Zici'nin Mukaddemesi. The Introductory Section of Habash's Astronomical Tables Known as the "Damascene Zij". - AUDFD. 13, 1955, No 4, 133-151.
10. The "Observation Well". - ACIHS VII (Jerusalem, 1953). 1955, 542-550.
11. Khwaja Nasir-i Tusi wa rasadkhana-yi Maragha. - AÜDFD. 14, 1956, No 1-2, 1-13; "Al-Tusi" [2], 1957, 57-75.
12. Khâzinî'nin rasat aletleri üzerindeki risalesi. Al-Khâzinî's Treatise on Astronomical Instruments. - AÜDFD. 14, 1956, No 1-2, 15-19.
13. 'Alâ al Dîn Mansûr's Poems on the Istanbul Observatory. - TTKB. 20, 1956, 411-464.
14. Kûhî'nin sınırlı zamanda sonsuz hareket hakkındaki yazısı. Al Qûhî on the Possibility of Iinfinite Motion in Finite Time. - TTKB. 21, 1957, 489-494.
15. A Short Article of Abû Sahl Waijan ibn Rustam al-Qûhî on the Possibility of Infinite Motion on Finite Time. - ACIHS VIII (Firenze, 1956). 1, 1958, 248-249.
16. Sâbit ibn Kurra'nin Pitagor teoremini tamimi. - TTKB. 22, 1958, 527-549.
17. Thâbit ibn Qurra's Generalization of the Pythagorean Theorem. - Isis. 51, 1960, 35-37.
18. The Observatory in Islam and its Place in the General History of the Observatory. - TTKY. (7), 38, 1960.
19. Uluğ Bey ve Semerkand'daki ilim faaliyeti hakkında Giyasüddin-i Kâşî'nin mektubu. Ghiyâth al-Dîn al-Kâshî's Letter on Ulug Bey and the Scietific Activity in Samarkand. - TTKY. (7), 39, 1960.

19a. Üçüncü Murad'ın İstanbul rasathanesindeki mücessem yer küresi ve Avrupa ile kültürel temaslar. - TTKB. 25, 1961, 397-445.

20. Abdülhamid ibn Türk'ün katışık denklemlerde mantikî zaruretler adlı yazısı ve zamanın cebri. Logical Necessities in Mixed Equations by `Abd al-Hamîd ibn Turk and the Algebra of His Time. - TTKY (7), 1962.
21. Ebû Sahl el Kûnî'nin bir açıyı üç eşit kısma bölme problemi için bulduğu çözüm. Solution of the Trisection of the Angle by Abu Sahl Wayjan ibn Rustam al Kûnî. - TTKB. 26, 1962, 693-700.
22. al-Kûnî's Trisection of the Angle. - ACIHS X (Ithaca, 1961). 1, 1964, 545-546.
23. Doğumunun 1000'inci yılında Beyruni. - "al-Biruni" [11], 1974, 1-40.
24. Beyrunî ve bilim tarihi. - "al-Biruni" [11], 1974, 67-81.
25. Ebû Nasr Mansûr'un sinüs kanununun tanımı üzerine Beyrûnî'nin mektubu. Al Bayrûnî's Letter on Abû Nasr Mansûr's Demonstration of the Sine Law. - "al-Biruni" [11]. 1974, 169-207.
26. A Short Tract of al-Fârâbî on Poetry and Rhythm. - ACIHS XIV (Tokyo, 1974). 3, 1975, 347-350.
27. Ulug Beg. - SeT. 1975.
28. Al-Biruni and the History of Science. - "al-Biruni" [9], 1979, 706-712.
29. Ibn Sina and Buridan on the Dynamics of the Projectile Motion. - "Ibn Sina" [18]. 1984, 141-160.
30. Ibn Sînâ'da astronomi ve astroloji. - "Ibn Sina" [18]. 1984, 161-201.
31. Ibn Sînâ'da ışık, görme ve gökkuşağı. - "Ibn Sina" [18]. 1984, 203-241.
32. Ibn Sina and Buridan on the Motion of the Projectile. "From Deferent to Equant" [1], 1987, 477-481.

Sayyar, Jamshid

1. Opis na persiyskite r"kopisi v Narodna Biblioteka Kiril i Metodi. Red. G.I.Kostigova. Sofiya, 1973.

Sayyid, Fuad

1. Makhṭuṭat al-Yaman. - MMMA. I, 1955, 194-214.
2. Nawadir al-makhṭuṭat fi maktaba Ṭal`at. - MMMA. 3, 1957, 197-236.13. al-Riyadiyyat. al-Hisab - al-jabr wa'l-muqabala - al-handasa. - Jami`a al-duwal al-`arabiyya. Ma`had al-makhṭuṭat al-`arabiyya. Fihrist al-makhṭuṭat al-musawwara. al-`Ulum, No 3. al-Qahira, 1960.
4. Fihrist al-makhṭuṭat, nashara bi'l-makhṭuṭat allati iqtanatha al-Dar min sana 1936-1955. 1-3. al-Qahira, 1380-1383 h. [1961-1963].
5. al-Kimiya wa'l-ṭabi`iyyat. - Jami`a al-duwal al-`arabiyya. Ma`had al-makhṭuṭat al-`arabiyya. Fihrist al-makhṭuṭat al-musawwara. 3. al-`Ulum. No 4, al-Qahira, 1963.

Sbath, Paul

1. Bibliothèque de manuscrits de Paul Sbath. 1-2. Cairo, 1928.
2. Le livre de temps d'Ibn Massawaih, médecin chrétien célèbre, décéde 857. - Bull. Inst. Egl. 15, 1933, 235-257.
3. Les axiomes médicaux de Yohanna Ben Massawaih. Le Caire, 1934.

Sbath, P. and Meyerhof, M.

1. Le livre des questions sur l'oeil de Honain ibn Ishaq. Le Caire, 1938.

Schacht, Josef (1902-1969)

1. Von den Bibliotheken in Stambul und Umgebung. - Zeitschr. für Semitistik. 5, 1927, 288-294, 8, 1930, 120-121; "Handschriften" [1], 1, 1986, 582-591.
2. Aus den Bibliotheken von Konstantinopel und Kairo. - Abhandl. der Preuss. Akad. der Wiss., phil. - hist. Klasse, 1928, No 8, 1-75; "Handschriften" [1], 1, 1986, 595-664.
3. Aus orientalischen Bibliotheken (III). - Abhandl. der Preuss. Akad. der Wiss., phil.-hist. Klasse, 1931, No 1, 1-57; "Handschriften" [2], 1, 1986, 666-722.
4. Hiyal. - EI^2. 3, 1967, 510-513.
5. Ibn Khaldun. - EI^2. 3, 1967, 825-832.

Scharif, M. M.

1. A History of Muslim Philosophy. 1-2. Wiesbaden, 1963-1966.

"Scheibe, Kugel"

1. Scheibe, Kugel, Schwarzes Loch - Die wissenschaftliche Eroberung des Kosmos. Herausg. von U.Schultz. München, 1990.

Schioler, Thorskild

1. Roman and Islamic Water-lifting Wheels. Odense, 1973.

Schipperges, Heinrich

1. al-Razi. - SeT. 3, 1975, 22-23

Schirmer, Oskar

1. Studien zur Astronomie der Araber. - SBPMS. 58, 1926/1927, 33-88.
2. Die muslimische Lehre von der Vermessung (`ilm al-misaha) und ihre Spuren in der mittelalterlichen Fachliteratur des Abendlandes. - Jahresbericht der Oberrealschule mit Knabenmittelschule Bayreuth. 1956-1957 (1957), 17-50.
3. Über die Ausmessung von kugelartigen Polyedern. Ein Beitrag zur Geschichte und unterrichtlichen Behandlung der regelmässigen und halbbregelmässigen Vielfläche. - Jahresbericht der Oberrealschule mit Knabenmittelschule Bayreuth. 1957-1958 (1958), 61-80.

Schloessinger, Max

1. Hibat Allâh Abû al-Barakât b. Alî b. Malka al-Baladî. - JE. 6. N. Y., 1904, 384.

Schmalzl, Peter

1. Zur Geschichte des Quadranten bei den Arabern. München, 1929.
2. Zwei Quadranten von Ibn al-Shatir. - "Ibn al-Shatir" [1], 1976, 27-35.

Schmeller, H.

1. Beiträge zur Geschichte der Technik in der Antike und bei den Arabern. - AGNM. 6, 1922.

Schmölders, Auguste (1809-1880)

1. Essai sur les écoles philosophiques chez les Arabes et notamment sur la doctrine d'Al Gazzâlî. P., 1842.

Schnaase, Leopold

1. Die Optik Alhazens. Stargard, 1889.
2. Alhazen. Ein Beitrag zur Geschichte der Physik. - Schriften der naturforschenden Gesellschaft in Danzig. 7, 1890, No 3, 140-164.

Schnell, Hans

1. Die Kugel mit dem Schemel (kurra ḏât al-kursî nach Alfons von Kastilien und seine arabische Quellen. Dissertation. Erlangen, 1924.

Schoy, Carl (1877-1925)

1. Die geschichtliche Entwicklung der Polhöbenbestimmungen bei den alteren Völkern. - Archiv der deutschen Seewarte. 34, 1911, 1-34; [38], 1, 1-34; "Mathematical Geography" [8], 1992, 1-35.
2. Die Sonnenuhren der Araber in ihrer Bedeutung für die arabische Astronomie und Religion. - Naturwiss. Wochenschr. 1911, No 16, 241-247; [38], 1, 36-42.
3. Die arabische Sonnenuhr der Araber im Dienste der islamischen Religionsübung. - Naturwiss. Wochenschr., 1912, No 40, 625-629; [38], 1, 43-47.
4. Arabische Gnomonik. - Archiv der deutschen Seewarte. 36, 1913, 1-40; [38], 1, 49-88.
5. Langenbestimmung und Zentralmeridian bei den älteren Völkern. - Mitteil. d. Kais. Geogr. Gesellschaft in Wien. 58, 1915, 27-62; [38], 1, 95-130; "Mathematical Geography" [8], 1992, 36-71.
6. Geschichtlich-astronomische Studien über die Dämmerung. - Naturwiss. Wochenschr., 1915, No 14, 209-214; [38], 1, 89-94.
7. Mittagslinie und Qibla. - Notiz zur Geschichte der mathematischen Geographie. - Zeitschr. der Gesellschaft für Erdkunde zu Berlin, 9, 1915, 558-576; [38], 1, 132-150; "Mathematical Geography" [8], 1992, 72-90.
8. Über einige dem Arabischen entlehnte Benennungen in den exakten Wissenschaften. - Mitteil. zur Geschichte der Medizin. 16, 1917, 125-130; [38], 1, 151-156.
9. Erdmessungen bei den Arabern. - Zeitschr. der Gesellschaft für Erdkunde. 11, 1917, 431-445; [38], 1, 160-174; "Mathematical Geography" [8], 1992, 91-105.
10. Der Gnomon. Notiz zur Geschichte der mathematischen Geographie. - Zeitschr. für die naturwiss. und erdkundl. Unterricht. 14, 1918, 279-287, 310-315; [38], 1, 175-189; "Mathe-matical Geography" [8], 1992, 109-123.
11. Die Mekka- oder Qiblakarte (Gegenazimutale mittabstandstreue Projektion mit Mekka als Kartenmitte). - Kartographische und Schulgeographische Zeitschr. 6, 1917, 184-185; "Mathematical Geography" [8], 1992, 106-108.
12. Elementare Theorie der ebenen Sonnenuhren nebst einigen speziellen Bemerkungen zur Gnomonik der Araber. - Zeitschr. für math. and naturwiss. Unterricht. 49, 1918, 49-57; [38], 1, 190-198.
13. Abhandlung des Hasan ibn al-Hasan ibn al-Haiṯam über eine Methode die Polhöhe mit grösster Genauigkeit zu bestimmen. - De Zee. 1920, No 10, 586-601; [38], 1, 199-214.
14. Das 20. Kapitel der grossen Hâkemitischen Tafeln des Ibn Jûnis: Über die Berechnung des Azimuts aus der Höhe und der Höhe aus dem Azimut. - Ann. der Hydrographie und maritimen Meteorologie. 48, 1920, 97-111; [38], 1, 215-289; "Mathematical Geography" [8], 1992, 140-154.
15. Über eine arabische Methode die geographische Breite aus der Höhe der Sonne im 1. Vertikal (Höhe ohne Azimut) zu Bestimmen. - Ann. der Hydrographie und maritimen Meteorologie. 49, 1921, 124-133; [38], 1, 242-251; "Mathematical Geography" [8], 1992, 167-176.
16. Abhandlung des al-Hasan ibn al-Hasan ibn Haiṯam (Alhazen) über die Bestimmung der Richtung der Qibla. - ZDMG. 75, 1921, 242-253; [38], 1, 230-241; "Mathematical Geography" [8], 1992, 155-166.
17. Abhandlung von al-Fadl b. Hatim an-Nairizi: über die Richtung der Qibla. - Sitzungsber. der Bayer. Akad. der Wiss., Math.-phys. Klasse, 1922, 55-68; [38], 1, 252-265; "Mathematical Geography" [8], 1992, 177-190.
18. Ortbestamningar i den arabiska astronomien. - Nordisk Astronomisk Tidskrift. 1922, No 2, 64-72; [38], 1, 266-274.
19. Abhandlung über die Ziehung der Mittagslinie, aus dem Buche über Analemma entnommen, samt dem Beweis dazu von Abu Sa'id ad-Darir. - Ann. der Hydrographie und maritimen Meteorologie. 50, 1922, 265-271; [38], 1, 293-299; "Mathematical Geography" [8], 1992, 209-215.
20. Die Bestimmung der geographischen Breite eines Ortes durch Beobachtung der Meridianshöhe der Sonne oder mittels der Kenntnis zweier anderen Sonnenhöhen und der zugehörigen Azimuten nach dem arabischen

Text der Hakimitischen Tafeln des Ibn Jünis. - Ann. der Hydrographie und maritimen Meteorologie. 50. 1922, 3-20; [38], 1, 275-292; "Mathematical Geography" [8], 1992, 191-208.
21. Aus der astronomischen Geographie der Araber. Originalstudien aus Al-Qanun al-Mas`udi des arabischen Astronomen Muh. b. Ahmad Abu al-Rihan al-Biruni. - Isis. 5, 1923, 51-74; [38], 1, 300-323; "Mathematical Geography" [8], 1992, 216-239.
22. Über den Gnomonschatten und die Schattentafeln der arabischen Astronomie. Ein Beitrag zur arabischen Trigonometrie nach edierten arabischen Handschriften. Hannover, 1923; [38], 1, 325-350.
23. Gnomonik der Araber (Die Geschichte der Zeitmessung und der Uhren). 1. B., 1923; [38], 2, 351-447.
24. Beiträge zur arabischen Trigonometrie (Originalstudien nach unedierten arabisch-astronomischen Manuskripten). - Isis. 5, 1923, 364-399; [38], 2, 448-483.
25. Sonnenuhren in der spätarabischen Astronomie. - Isis. 6, 1924, 332-360; [38], 2, 484-512.
26. The Geography of the Moslems in the Middle Ages. - Geographical Review. 14, 1924, No 4, 257-269; [38],2, 513-525; "Mathematical Geography" [8], 1992, 240-252.
27. Die Bestimmung der geographischen Breite der Stadt Gazna mittels Beobachtungen im Meridian, durch den arabischen Astronomen und Geographen Al-Biruni. - Ann. der Hydrographie und maritimen Meteorologie. 53, 1925, No 2, 41-47; [38], 2, 571-577; ."Mathematical Geography" [8], 1992, 253-259.
28. Abhandlung des Schaichs ibn `Ali al-Hasan ibn al-Hasan ibn al-Haitham: Über die Natur der Spuren (Flecken) die man auf der Oberfläche des Mondes sieht. Hannover, 1925, [38], 2, 527-566.
29. Drei planimetrischen Aufgaben des arabischen Mathematiker Abu'l Jud Muhammad ibn al-Lith. - Isis. 7, 1925, No 4, 5-8; [38], 2, 367-570.
30. Graeco-arabische Studien nach mathematischen Handschriften der Vizeköniglichen Bibliothek zu Kairo. - Isis. 8, 1925, 21-40; [38], 2, 578-597.
31. Behandlung einiger geometrischer Fragepunkte durch muslimische Mathematiker. - Isis. 8, No 2(26), 1926, 254-263; [38], 2, 598-607.
32. Al-Biruni's Method of Approximation of Chord 40°. - Amer. Math. Monthly. 33, 1926, 95-96; [38], 2, 608-609.
33. Al-Biruni's Computation of the Value of π- Amer. Math. Monthly. 33, 1926, 323-325; [38], 2, 610-612.
34. Die trigonometrischen Lehren des persischen Astronomen Abu'l Raihan Muhammad ibn Ahmad al-Biruni, dargestellt nach al-Qanun al-Mas`udi. Hannover, 1927; [38], 2, 629-746.
35. Kibla. - EI. 2, 1934, 985-989.
36. Al-Shirazi `Abd al-Malik. - EI. 4, 1934, 407.
37. Şîrâzî Abû'l Husayn Abd al-Malik. IA. 11, 1968, 563.
38. Beiträge zur arabisch-islamischen Mathematik und Astronomie. 1-2. Frankfurt am Main, 1988.

Schrader, Dorothy V.

1. Ahmad ibn Yusuf. - DSB, 1, 1970, 12-13.

Schrader, W. R.

1. The Epistola de proportione et proportionalitate of Ametus Filius Josephi. Thesis. Wisconsin, 1961.

Schramm, Matthias (b. 1928)

1. Zur Entwicklung der physiologischen Optik in der arabischen Literatur. - SA. 43, 1959, 289-316.
2. Ibn al-Haithams Weg zur Physik. Wiesbaden, 1963.
3. Steps Toward the Idea of Function. A Comparison between Eastern and Western Science of the Middle Ages. - History of Science. 4, 1965, 70-103.
4. Ibn al-Haythams Stellung in der Geschichte der Wissenschaften. - Fikrun wa Fann. Hamburg, 1965, No 6, 1-22.
5. Theoretische und praktische Disziplin bei al-Farabi. - ZGAIW, 3, 1986, 1-55.

Schub, Pincus and Levey, Martin

1. Book on Indeterminate Problems of Abu Kamil. - Centaurus. 13, 1968, 91-94.
2. Indeterminate Problems of Abu Kamil. - Atti della Accad. naz. dei Lincei, Memorie, Classe di sc. fis., mat. e nat. (8), 10, 1970, No 1: 2, 21-96.

Schützinger, H.

1. Der Qadi'l-Maristan. - Welt des Islams. 18, 1977, 101-115.

"Science in Carolingian Times"

1. Science in Western and Eastern Civilization in Carolingian Times. Ed. P.L.Butzer and D.Lohrmann. Basel, 1993.

"Science in the Middle Ages"

[1]. Science in the Middle Ages, ed. D.C.Lindberg, Chicago, 1978.

"Scientific Change"

1. Scientific Change, ed. A.C.Crombie. L., 1963.

"Scientific Exchanges"

1. Scientific Exchanges between India and Soviet Central Asia, ed. Abdur Rahman. New Dehli, 1985.

Scriba, Christoph J.

1. John Wallis' treatise on angular sections and Thâbit ibn Qurra's Generalization of the Pythagorean Theorem. - Isis. 57, 1966, No 1, 56-66.

1a. Zur Bestimmung rationaler Punkte auf elliptischen Kurven. Das Problem von Beha-Eddin `Amuli. Hamburg, 1984.

2. Zur Konstruktion des regelmässigen Neunecks in der islamischen Welt. - "Mathemata" [1], 1985, 87-94.

Sédillot, Louis Amélie (1808-1875)

1. Du traité des connus géométriques de Hassan ben Haitham. - JA (3). 13, 1834, 435-458.
2. Découverte de la variation par Aboul Wefa. - JA (3). 16, 1835, 420-438.
3. Recherches nouvelles pour servir à l'histoire des sciences mathématiques chez Orientaux, ou notice de plusieurs opuscules qui composent le manuscrit 1104 de la Bibliothèque du Roi. - NEM. 13, 1838, 126-150.
4. Mémoire sur les systèmes géographiques des Grecs et des Arabes. P., 1842.
5. Remarques à l'occasion de la communication de M.Munk. - CR, 16, 1843, 1446-1448.
6. Mémoire sur les instruments astronomiques des Arabes. P., 1844\sb cs 3; reéd. par Fuat Sezgin. F.M., 1989.
7. Materiaux pour servir à l'histoire comparée des sciences mathématiques chez les Grecs et les Orientaux. 1-2. P., 1845-1849.
8. Introduction. - Ulugh Beg [4], 1847, I-CIV.
9. L'algèbre chez Arabes. - JA (5). 2, 1853, 323-356.
10. Courtes observations sur quelques points de l'histoire de l'astronomie et des mathématiques chez les orientaux. P., 1863.
11. De la détermination de la troisième inégalité lunaire ou variation par Aboul-Wefâ et Tycho Brahé. - CR. 66, 1868, 286-289.
12. Sur les emprunts que nous avons faits à la science arabe et en particulier à la détermination de la troisième inégalité lunaire ou variation. - BBSMF. 8, 1875, 63-78.

Seemann, H. J,

1. Die Instrumente der Sternwarte zu Marâgha nach den Mitteilungen von al-`Urdî. - SBPMS. 60, 1928 [1929], 15-126.

Seemann, H. J. and Mittelberger, Th.

1. Das kugelförmige Astrolab nach den Mitteilungen von Alfons X. von Kastilien und den vorhandenen Quellen. - AGNM. 8, 1925.

Segal, J. B.

1. Ibn al-`Ibri. - EI². 3, 1971, 804-805.

Şehsuvaroğlu, Bedi N.

1. Ilham-al Mukaddes min-al Feyz-al Akdes risâlesi ve Kâtip Çelebi'nin ilmî zihniyeti hakkında birkaç söz. - "Hajji Halifa" [1], 1957, 141-148.

Seidel, Ernst (1852-1919)

1. Die Medizin im Kitâb mafâtih al-`ulûm. - SBPMS. 47, 1915 [1916], 1-79.

Selen, Hamit Sadi

1. Cihannüma. - "Hajji Khalifa" [1], 1957, 121-133.

Seligsohn, Max

Galina, Moses. - JE. 5, 1903, 554-555.

1. Mizrahi, Elija. - JE. 8, 1904, 628-631.
2. Ibn Wakar, Joseph. - JE. 6, 1904, 552-553.

Seligsohn, M. and Gottheil, R.

1. Gregory bar Hebraeus Abu al-Farag, abu Harun. - JE. 6, 1904, 9.

Sellheim, Rudolf

1. al-Sedjawandi, Siradj al-Din. - EI². 8, 1994, 839-840.

Semyonov, Aleksandr Aleksandrovich (1873-1958)

1. Zabytyy sredneaziatskiy filosof XVII v. i yego "Traktat o sokrytom". - Izv. Obshchestva dlya izucheniya Tajikistana i iranskikh narodnostey za yego predelami. 1. Tash., 1928, 137-146.
2. Opisaniye persidskikh, arabskikh i turetskikh rukopisey Fundamental'noy biblioteki SAGU. 1. Tash., 1935. Opisaniye tajikskikh, persidskikh, arabskikh i tyurkskikh rukopisey Fundamental'noy biblioteki SAGU. 2. Tash., 1956.
3. Al-Biruni - velichayshyy uchonyy srednevekov'ya Vostoka i Zapada. - Literatura i iskusstvo Uzbekistana. 1, 1938, 1006-116.
4. Abu Ali ibn Sina. Stalinabad, 1945; 1953.
5. Sredneaziatskiy traktat po muzyke Derwisha Ali (XVII v.). Tash., 1946.
6. Al-Biruni - velichayshiy uchonyuy srednevekovogo Vostoka i Zapada. Stalinabad, 1948.
7. Biruni - vydayushchiysya uchonyy srednevekov'ya. - "al-Biruni" [2], 1950, 26-42.
8. Urta asrning mashhur olimi Biruniy. - "al-Biruni" [3], 1950, 25-46.

Sen, S. N.

1. Astronomy. - A Concise History of Science in India. New Delhi, 1971, 58-135
2. Mathematics. - A Concise History of Science in India. New Delhi, 1971, 136-209.
3. Al-Biruni and the Determination of Latitudes and Longitudes in India. - "al-Biruni" [13], 1975, 185-197.

Serebryakov, Sergey Borisovich

1. Traktat Ibn Siny (Avitsenny) o lyubvi. Tb., 1976.

Sergeant, R. B.

1. A Handlist of the Arabic, Persian and Hindustani Manuscripts of New College, Edinburgh - L., 1942.

Sergeyeva, Nadezhda Dmitriyevna (b. 1944)

1. Traktat al-Fergani ob astrolyabii. - TNKA XII (m), 1970, 44-47.
2. Astronomicheskiye trudy al-Khorezmi i al-Fergani. ADK (fm). M., 1973.
3. Astronomicheskiye tablitsy al-Khorezmi. - TNKA XVI (m), 1973, 35-42.

Sergeyeva, N. D. and Karpova, L. M.

1. Dokazatel'stvo al-Fergani osnovnoy teoremy o stereograficheskoy proyektsii. - VIET. 1972, No 40, 50-53.
2. Al-Farghani's Proof of the Basic Theorem of Stereographic Projection. Transl. by Sheila Embleton. - R. B. Tomson [1], 1978, 210-217.

Şeşen, Ramazan

1. Türkiye kütüphanelerinde bulunan bâzı mühim yazmalar. - Tarih Dergisi. 23, 1969, 83-110.
2. Diyarbakır kütüphanesinde bulunan bazı yazmalar. - Araştırma. 4, 1966, 123-227.
3. The translator of the Belgrade Diwan Council, Osman b. Abdülmennan & his Place in the Translation Activities- Transfer of Modern Science & Technology to the Muslim World, İstanbul 1992, p.371-383.

Şeşen, R., İzgi, C., and Akpınar, C.

1. Fihrist makhṭuṭat maktaba Kubrili. Catalogue of Manuscripts in the Köprülü Library. 1-3, İstanbul, 1406 h. - 1986.

Sesiano, Jacques

1. Un mémoire d'Ibn al-Haytham sur un problème arithmétique solide (c'est-à-dire un problème de la théorie des nombres résolus à l'aide de sections coniques). - Centaurus. 20, No 3, 1976, 189-195.
2. Les méthodes d'analyse indéterminée chez Abu Kamil. - Centaurus. 21, 1977, 89-105.
3. Le traitement des équations indéterminées dans le Badi' fi'l-hisab d'Abu Bakr Al-Karaji. - AHES. 17, 1977, No 4, 297-379.
4. Note sur trois théorèmes de Mécanique d'al-Quhi et leur conséquence. - Centaurus. 22, 1979, No 4, 281-297.
5. Herstellungsverfahren magischer Quadrate aus islamischer Zeit (I). - SA. 64, 1980, No 2, 187-196.
6. Herstellungsverfahren magischer Quadrate aus islamischer Zeit (II). - SA. 63, 1981, No 3, 251-265.

7. Books IV to VII of Diophantus' "Arithmetica" in the Arabic Translation Attributed to Qusta ibn Luqa. N.Y. - Hb. - B., 1982.
8. Un système artificiel de numération du moyen âge. - "Mathemata" [1], 1985, 165-196.
9. The Appearance of Negative Solutions in Mediaeval Mathematics. - AHES, 32, 1986, 105-150.
10. Le Liber Mahameleth, un traité mathématique Latin composé au XII^e siècle en Espagne. - "al-Multaqi" [1], 1986, 17-19.
11. A Treatise by al-Qabisi (Alchabitius) on Arithmetical Series. - "From Deferent to Equant" [1], 1987, 483-500.
12. Herstellungsverfahren magischer Quadrate aus islamischer Zeit (II'). - SA, 71, 1987, No 1, 78-79.
13. Survivance medievale en Hispanie d'un problème né en Mésopotamie. - Centaurus, 30, 1987, 18-61.
14. Un complément de Tabit ibn Qurra au "Peri diaireseon" d'Euclide. - ZGAIW, 4, 1987/88, 149-159.
15. Der Liber Mahameleth des Johannes Hispalensis. - ACIHS XVIII, 1989, Q2, 8.
16. Koptisches Zahlensystem und (griechisch-)koptische Multiplikationstafeln nach einem arabischen Bericht. Centaurus. 32, 1989, 53-65.
17. al-Hwarizmi (Muhammad ibn Musa). - LM. 5, 1990, 241.
18. An Arabic Treatise on the Construction of Bordered Magic Squares. - HM. 42, 1991, 13-31.
19. Two Problems of Number Theory in Islamic Times. - AHES, 41, 1991, No 3, 235-238.
20. La version latine médiévale de l'Algèbre d'Abu Kamil. - "Vestigia" [1], 1993, 315-452.
21. Quelques méthodes arabes de construction des carrés magiques impaires. - Bull. Soc. Vaud. Sci. Nat. 83, 1994, No 1, 51-76.
22. Herstellungsverfahren magischer Quadrate aus islamischer Zeit (III). - SA, 79, 1995, No 2, 193-226.
23. Un traité médiéval sur les carrés magiques. De l'arrangement harmonieux de nombres, l'édition annotée et translation d'un manuscrit arabe anonyme sur la construction des carrés magiques. Lausanne, 1996.
24. L'Abrégé enseignant la disposition harmonieuse des nombres, un manuscrit arabe anonyme sur la construction des carrés magiques. - "From Baghdad to Barcelona" [1]. I, 1996, 103-155.
25. Kitab al-Misaha d'Abu Kamil. - Centaurus. 38, 1996, No 1, 1-21.
26. Abu Kamil. - ENWC. 1997, 4-5.
27. al-Karaji. - ENWC. 1997, 475-476.
28. Al-Khwarizmi. - ENWC. 1997, 482-483.
29. Number Theory in Islamic Mathematics. - ENWC. 1997, 786-787.
30. Al-Uqlidisi. - ENWC. 1997, 993.
31. Abu'l-Wafa al-Buzjani's Treatise on Magic Squares. - ACIHS XX, 1997, 63.

Severus Sebokht (No 2)

1. Sévere Sabokht. Traité de l'astrolabe. Ed. et trad. par F.Nau. - JA (13) 3, 1899, 56-101, 238-303.

Seybold, Christian Friedrich (1869-1921)

1. Sujuti's al-Muna fi'l-Kuna. - ZDMG. 49, 1895, 231-243.
2. Verzeichnis der arabischen Handschriften der königlichen Universitätsbibliothek zu Tübingen. 1907; "Handschriften" [2]. 3. 1987, 209-308.
3. Al-Abhari's Isaghuji und al-Fanari's Kommentar dazu. - Der Islam, 92, 1939, 112-115.
4. al-Dabbi. - EI. 1, 1913, 922; EI^2. 1, 1954, 72.
5. al-Idrisi. - EI. 2, 1927, 451-452.
6. Dabbī. - IA. 3, 1954, 446.

Sezgin, Fuat

1. Atıf Efendi Kütüphanesi vakfiyesi. - Türk Dili ve Edebiyatı Dergisi, 1955, 132-144; "Handscriften" [1] 3, 1986, 906-918.
2. Üç mecmu`at ar-rasa'il. - Islâm Tetkikleri Enstitüsü Dergisi, 2, 1958, No 2-4, 231-256; "Handschriften" [1], 3, 1086, 919-944.
3. Geschichte des arabischen Schrifttums 1. Qur'anwissenschaften. Hadit. Geschichte. Fikh. Dogmatik bis ca. 430 H. Leiden, 1967.
4. Geschichte des arabischen Schrifttums 3. Medizin. Farmazie. Zoologie. Tierheil-kundek bis ca. 430 H. Leiden, 1970.
5. Geschichte des arabischen Schrifttums 4. Alchimie. Chemie. Botanik. Agrikultur bis ca. 430 H. Leiden, 1971.
6. Geschichte des arabischen Schrifttums 5. Mathematik bis ca. 430 H. Leiden, 1971.
7. Geschichte des arabischen Schrifttums 2. Poesie bis ca. 430 H. Leiden, 1975.
8. Ta'rikh al-turath al-`arab, naqala al-duktur Fahmi Abu'l-Fadl. 1-2. al-Qahira, 1971-1977.
9. Makana al-`arab fi ta'rikh al-`alum. - ISHAS 1, 1, 1977, 45-58.
10. Geschichte des arabischen Schrifttums 6. Astronomie bis ca. 430 H. Leiden, 1978.

11. Geschichte des arabischen Schrifttums 7. Astrologie, Meteorologie und Verwandtes bis ca. 430 H. Leiden. 1979.
12. Geschichte des arabischen Schrifttums 8. Lexicographie bis ca. 430 H. Leiden, 1982.
13. Geschichte des arabischen Schrifttums 9. Grammatik bis ca. 430 H. Leiden, 1984.
14. Muhadarat fi ta'rikh al-`ulum al-`arabiyya wa'l-islamiyya. Frankfurt, 1984.
15. Kitab al-athar ul-`ulwiyya li-Saufrastis. - ZGAIW. 1, 1984, arab. 9-49.
16. Khwarizmi, kitabshunasi wa athar. - "al-Khwarizmi" [3], 1984, 71-88.
17. Qadiya iktishaf al-ala al-rasadiyya "`asa Ya`qub". - ZGAIW. 2, 1985, arab. 7-73.
18. Tariqa Ibn al-Haytham fi ma`rifa khatt nisf al-nahar. - ZGAIW. 3, 1986, arab. 7-43.
19. Kitab dalail al-qibla li-Ibn al-Qass. Das Buch über die Orientierung nach Mekka. - ZGAIW. 4, 1987/88, arab. 1-45.
19a. Kitab dalail al-qibla li-Ibn al-Qass. Zweite Version.- ZGAIW. 5, 1989, arab. 7-10.
20. Risalat Ibn Ridwan fi daf` madarr al-abdan bi-ard Misr. - ZGAIW. 6, 1990, arab. 7-44; "Historical Geography of Egypt" [1], 1992, 353-400.
21. The Contribution of the Arabic-Islamic Geographers to the Formation of the World Map. Text in English, German, and Arabic, 48 maps in colour. F.M., 1987.
22. al-Mas`udi, Ibrahim b. Wasifsah und das Kitab al-`Aga'ib, Aigyptiaka in arabischen Texten des 10. Jahrhunderts n. Chr. - ZGAIW. 10, 1993, 1-70.
23. Geschichte des arabischen Schrifttums 10. Geographie bis ca. 430 H. Leiden, 2000.

Shabbuh, Ibrahim

1. Sijil al-qadim li-maktaba Jami` al-Kayruan. - MMMA. 2, 1956, 339-372.

Shad, Parviz Huseynovich

1. Filosofiya Ibn Siny. ADK (fs). M., 1957.
2. Teoriya poznaniya Ibn Siny. - Iz istoriii filosofii. Uch. zap. Akad. obshch. nauk. 28, 1957, 3-27.
3. Ar-Razi - iranskiy materialist. - Voprosy filosofii. 1958, No 6, 79-82.

Shafi, Maulavi Mohammed

1. Catalogue of Oriental Manuscripts of Kapurthala Library. - Oriental College Magazine. Lahore. 1927, No 8, 1-31, No 11, 62-67, 1928, No 2, 1-4.
2. Abu Nasr ibn `Iraq aur as ka sana wafat. Abu Nasr ibn `Iraq and the Date of his Death. – 60. doğum yılı münasebetiyle Zeki Velidi Togan'a Armağan. Symbolae in honorem Z.V. Togan. Istanbul. 1950-1955, 484-490.

Shah, Mazhar H.

1. Avicenna. His Life and Works. Karachi, 1958.
2. The General Principles of Avicenna's Canon of Medicine. Karachi, 1966.

Shahhat, `Ali Ahmad

1. Abu'l-Rayhan al-Biruni. al-Qahira, 1388 h. [1968).

al-Shahrastani (No 461)

1. al-Milal wa'l-nihal. al-Qahira, 1261 h. [1845].
2. Book of Religions and Philosophical Sects, Now First Edited from the Collation of Several Mss. by the Rev. William Cureton. 1-2. L., 1846.
3. Religionsparteien und Philosophenschulen. Übers. Th. Haarbrückner. Halle/S, 1850.
4. al-Milal wa'l-nihal. 1-3. al-Qahira, 1317 h. [1899].
5. Kitab nihaya al-iqdam fi `ilm al-kalam. Ed. A.Guillaume. Ox., 1934.
6. Kniga o religiyakh i sektakh (Kitab al-milal wa'l-nihal). 1. Islam. Per., vvedeniye i komm. S.M.Prozorova. M., 1984.

Shaislamov, Shaikram [Shoislomov, Shoikrom]

1. Ibn Sinaning tib haqidagi she"riy asari ("Urjuza"). Toshkent, 1972.
2. Urjuza fi'l-tibb Ibn Siny. ADK (fl). Tash., 1973.

Shalma, Videnjara Nath and Mehra, Anjani K.

1. Precision Instruments of Sawai Jai Singh. - IJHS. 26, 1991, 249-296.

Shamsi, F. A.

1. Al-Farabi's Treatise on the Ambiguities in Chapters I & V of Euclid's Elements. - ISHAS. 2, 1979, 75.
2. Abu al-Raihan Muhammad ibn Ahmad al-Bayruni 362/973 - ca 443/1051. - "al-Biruni" [9]. 1979, 280-288.
3. Al-Farabi's Treatise on Certain Obscurities in Chapters I and V of Euclid's Elements. - JHAS. 8, 1984, 31-45.

Shamsiddinov, D. Sh.

1. Omar Khayyam o prirode obshchikh ponyatiy, Dushanbe, 1968.
2. Gnoseologicheskiye i logicheskiye vozzreniya Omara Khayyama. Dushanbe, 1968.

Shamuhamedov [Shomuhamedov], Sh. Sh.

1. Umar Khayyom (Hayoti va ijodi). Tash., 1962.

Shanachi, Qazim Mudir, Nurani, `Abdallah, and Binash, Taqi

1. Fihrist-i nuskhaha-yi khaṭṭi-yi du kitabkhana-yi Mashhad - Madrasayi Nawwab, Astan-i Quds. Tehran, 1351 s. h. [1972].
2. Fihrist-i nuskhaha-yi khaṭṭi-yi chahar kitabkhana-yi Mashhad - Madrasa-yi Sulayman khan, Madrasa-yi Mirza Ja`far, Kitabkhana-yi Farhang, Jami`-i Gawhar Shad. Tehran, 1351 s.h. [1972].

Shangin, Mstislav Antonovich

1. Grecheskiy perevod Abu Mashara v rukopisi Biblioteki Akademii nauk. - IAN SSSR. 20, 1926, No 10-11, 907-916.
2. Epistola Mesallah in pluviis et ventis. - IAN SSSR, otd. guman. nauk. 1929, No 9, 707-718.

Sharipov [Sharifov], Anvar Jumaniyaz ughli

1. O nekotorykh materialisticheskikh tendentsiyakh filosofskikh vozzreniy Beruni. - "Voprosy filosofii". Tash., 1965, 112-121.
2. K kritike burzhuaznykh kontseptsiy mirovozzreniya Biruni. - ONU. 1965, No 8, 36-43.
3. Maloizvestnyye stranitsy perepiski mezhdu Birini i Ibn Sinay. - ONU. 1965, No 11, 35-42.
4. Yestestvenno-nauchnyye i filosofskiye vozzreniya Biruni. ADK (fs). Tash., 1966.
5. Velikiy myslitel' Abu Rayhan Beruni. Tash., 1966.
6. Abu Rayhan Beruni. - "Iz filosofskogo naslediya" [1], 1972, 199-233.
7. O vzglyadakh Beruni na obshchestvo i cheloveka. - "al-Biruni" [5], 1972, 66-75.
8. O filosofskoy otsenke traktata Beruni o trudakh al-Razi. - ONU. 1973, No 7-8, 80-82.
9. Ideynye svyazi Beruni i Farabi. - "al-Farabi" [4], 1975, 50-53.
10. Filosofskiye vozzreniya Mahmuda Chagmini. - "Ocherki" [1], 1977, 159-164.

Sharipova [Sharifova], Muborak Said zoda (b. 1939).

1. Arifmeticheskiye glavy "Knigi istseleniya" Ibn Siny. - Nauch. trudy aspirantov Dushanb. ped. instituta. 1966, 235-281.
2. Matematicheskiye glavy "Knigi istseleniya" Ibn Siny (Planimetriya). - Voprosy istorii i metodiki elementarnoy matematiki. 3. Dushanbe, 1967, 7-29.
3. Matematicheskiye glavy "Knigi istseleniya" Ibn Siny. ADK (fm). Dushanbe, 1967.
4. Ma"lumot dar borai adadhoi figuravi. - Maktabi soveti, 1967, No 5, 33-37.
5. Voprosy teorii chisel v "Knige istseleniya" Ibn Siny. - Uch. zap. Dushanb. gos. ped. instituta. 71, 1970, 3-30.

Sharipova, M. S. and Muzafarova, H. R.

1. Qutbiddin Sherozi va risolai riyozii u. - Maktabi soveti. 1972, No 1, 32-35.

Shawer, Chere Ardine Winnek

1. Abu Bakr Muhammad ibn Zakariya al-Razi on reason and nature. Diss. Ann Arbor, 1974.

Shawky, Jalal S. A.

1. Fundamental Contributions of Moslem Scholars to Medieval Mathematics. - International Congress of Mathematical Sciences. Karachi, 1975.
2. Dirasat al-`arab fi suluk al-ajsam al-mutaharrika. Behavior of Moving Bodies. Arab Studies. - AH. 1, 1975, 30-52, 5-6.
3. al-`Arab wa qawanin al-haraka. Contribution of Arab Scholars to the Laws of Motion. - AH. 2, 1976, 56-69, 12
4. Riyadiyāt Baha al-Din al-`Amili (983-1031 h. [1547-1622]), Halab, 1396 h. [1976].
5. Al-Biruni's Contribution to the Physical Sciences. - ISHAS 1. I, 1977, 251-273; II, 1978, 171-172.

6. Muslim Contribution to the Theory of Polynomials. Ma qaddama al-`arab li-nazariyya al-hudud al-jabriyya al-muta`adada. - ISHAS 2, 1979, 76, Suppl. 56-57.

Shawky, J. and al-Daffa`, `A. `A.

1. al-`Ulum al-riyadiyah fi al-hidarah al-islamiya. N.Y., 1985-1986.

Sha`ya ibn Firighun (No 263)

1. Jawami` al-`ulum. Compendium of Sciences. With Introduction in Arabic and English by Fuat Sezgin. F.M., 1985.

Shayegan, Yegane

1. Avicenna on Time. Diss. Ann Arbor, 1986.

Shboul, Ahman M. N.

1. Al-Mas'udi and his World. A Muslim Humanist and His Interest in Non-Muslims. L., 1979.

Shcheglov, Vladimir Petrovich (1904-1985)

1. K voprosu o geograficheskikh koordinatakh i azimutakh sekstanta observatorii Ulug-beka v Samarkande. - Astron. Zhurnal. 2, 1953; [11], 68-71.
2. Astronomicheskiye teorii Birunu. - al-Biruni [15], 1957, XXIII-XXXI.
3. Observatoriya Ulugbeka v Samarkande. M., 1958.
4. Samarkandskaya observatoriya Ulugbeka. - Zemlya i vselennaya. 1967, No 4, 62-68.

4a. Vstupitel'naya glava k "Atlasu zvyozdnogo neba" Geveliya. - Hevelius [2], 1968, 1970, 1978, 1981.

5. Beruni i problema geograficheskoy dolgoty. - ONU. 1973, No 7-8, 65-70; [11], 220-227.
6. Rasprostraneniye "Zija" Ulugbeka v yevropeyskoy pechati. - ACIHS XIII (M., 1971). 3-4, 1974, 135-138; "Iz istorii" [3], 1979, 143-151.
7. Ikonografiya Ulugbeka. - "Iz istorii" [3], 1979, 19-28.
8. Observatoriya Ulugbeka. Tash., 1979.
9. Razyshchem plity ot kvadranta Ulugbeka. - Zemlya i vselennaya, 1980, No 5, 44-45; [11], 255-256.
10. Al-Khorezmi i sovremennost'. - "Al-Khwarizmi" [4], 29-32; [11], 263-266.
11. Izbrannyye trudy. Astronomiya. Istoriya nauki. Populyarnye stat'i. Tash., 1989.

13. Ulugbek. - [11], 227-250.

Shehaby, Nabil

1. The Propositional Logic of Avicenna, Translation from al-Shifa': al-Qiyas, with Introduction, Comm. and Glossary. Dordrecht - Boston, 1973.
2. Ishaq ibn Hunain. - DSB. 7, 1973, 24-26.

Sheikh, Saeed [Sa`id]

1. Islamoc Philosophy. L., 1982.

Shermatov, Muhibullo Shermatovich

1. Kommentarii ash-Shirazi k zvyozdnomu katalogu al-Sufi. - Uch. zap. Dushanb. gos. ped. instituta. 81, 1971, 73-83.
2. Empiricheskoye dokazatel'stvo pretsessii i izmeneniya nakloneniya ekliptiki v tru-dakh ash-Shirazi. - Uch. zap. Dushanb. gos. ped. instituta. 81, 1971, 84-90.
3. Fizika i astronomiya v trudakh Kutbeddina ash-Shirazi. ADK (fm). M., 1973.
4. Idei ash-Shirazi o prirode pepel'nogo tsveta Luny i svecheniya planet. - TNKA XVI (f), 1973, 43-49.
5. Nekotoryye voprosy fiziki atmosfery v trudakh Kutbaddina Shirazi. - ACIHS XIII (M., 1971), 3-4, 1974, 175-177.

Shermatov, M. and Sobirov, G.

1. K istorii opredeleniya geograficheskikh koordinat zemnoy tochki na Vostoke. - Uch. zap. Dushanb. gos. ped. instituta. 72, 1970, 38-53.

Shermuhammadov, Bahrom

1. Abuali ibni Sino. Dushanbe, 1962.

Shevchenko, Mikhail

1. An Analysis of Errors in the Star Catalogues of Ptolemy and Ulugh Beg. - JHA. 21, 1990, No 2, 187-201.

Sheynin, Oskar Borisovich (b. 1925)

1. Mathematical Treatment of Astronomical Observations (A Historical Essay). - AHES. 11, 1973, 97-126.
2. Al-Biruni and the Mathematical Treatment of Astronomical Observations. - ASP. 1992, No 2, 199-228.

Shidfar, Betsi Yakovlevna

1. Ibn Sina. M., 1980.

Shikhsaidov, Amri Rizayevich and Umarov, Huladita

1. Majmu`a kutub Muhammad Sayyid Sa`iduf. - AJ. 4, 1989, 193-209.

Shiloah, Amnon

1. Un "Problème musical" inconnu du Thabit ibn Qurra. - Orbis musicae, Tel Aviv, 1, 1971, No 1, 25-38; [6], No 8.
2. Un ancien traité sur le `ud d'Abu Yusuf al-Kindi. Edition and translation. - Israel Oriental Studies. 4, 1974, 179-209; [6], No 1.
3. The Epistle on Music of the Ikhwan al-Safa, Bagdad, 10th century. Edition and translation. Documentation and Studies Department. Musicology and the Chaim Rosenberg School of Jewish Studies. Tel Aviv, 1978, 3-73; [6], No 3.
4. The Theory of Music in Arabic Writings (c. 900 - 1900). Descriptive Catalogue of Manuscripts in Libraries of Europe and the USA. L., 1979.
5. Répertoire international des sources musicales. Internationales Quellenlexikon der Musik. International Inventory of Musical Sources. München, 1979.
6. The Dimension of Music in Islamic and Jewish Culture. Aldershot, 1993.

al-Shimali, `Abduh

1. Ta'rikh al-falsafa al-`arabiyya al-islamiyya. al-Qahira, 1965.

al-Shindi, Muhammad al-Bashir

1. Fihris ba`d al-makhṭuṭat al-`arabiyya al-muwadda`a bi-maktaba al-Baladiyya al-Iskandariyya mundh inshanha sana 1892 m. ila sana 1930 m. 1-2, al-Iskandariyya, 1373-1374 h. [1954].

al-Shirazi (No 499)

1. Premises which are Required to Simplify the Understanding of Propositions in the Seventh Book of the Treatise of Apollonius on Conics. - Apollonius [3] II, 652-657.

al-Shirazi (No 668)

1. Sharh Hikma al-ishraq. Tehran, 1314-1316 h. [1896-1898].
2. Durra al-taj li-ghurra al-Dibaj, ba kushish wa tashih-i Sayyid Muhammad Mishkat. 1-4. Tehran, 1317-1320 s. h. [1939-1941].
3. "Zhemchuzhina korony". Nauka o muzyke. Per. P.R.Rajabova. - "Muzykal'naya es-tetika" [1]. 1967. 288-302.
4. Kommentarii k "Traktatu o dvizhenii kachaniya i otnosheniya mezhdu ploskim i krivym. Per. J.ad-Dabbakha. - Nauchnoye nasledstvo. 6, M., 1982, 175-228.

Shirazi, Ziya al-Din ibn Yusuf

1. Fihrist-i kutubkhana-yi Danishkada-yi ma`qul u manqul dar Madrasa-yi `ali-yi Sipahsalar. 1-2. Tehran, 1313-1315 s.h. [1934-1936].
2. Fihrist-i kitabkhana-yi Majlis Shura-yi Milli. 3. Tehran, 1318-1321 s.h. [1939-1942].

Shirozi, J. M. K.

1. Life of Omar Khayyam. Edinburgh, 1905.

Shirvani, Muhammad

1. Catalogue of Persian and Arabic Manuscripts of Validi Library, Yazd. 1-2. Teheran, 1350 s.h. [1971].

al-Shirwani (No 443)

1. The Astronomical Works of Gregory Chioniades, I. The Zij al-`Ala'i. Text, Transl., Comm. by D.Pingree. Amsterdam, 1985.

al-Shirwani (No 868)

1. Majalla fi'l-musiqa. Codex on Music Facsimile Edition. Introduction in English Arabic by E.Neubauer. F.M., 1986.

Shishkin, Vasiliy Afanas'yevich

1. Observatoriya i yeyo issledovaniya. - Trudy Instituta istorii i arkheologii AN Uz. SSR. 5. Obsevatoriya Ulugbeka. 1953. 3-100.
2. Samarkandskaya observatoriya Ulugbeka. - "Iz istopii" [1], 1965, 200-226.

Shishmanov, A.

1. Sobraniye vostochnykh rukopisey v Sofii. - Zap. Vostoch. otd. Imp. Russ. arkheolog. obshchestva. 23, 1913, 61-76.

Shlionskiy, L.E.

1. "Poema o meditsine" Avitsenny. ADK (fl). Dushanbe, 1969.

Shloming, R.

1. Thabit ibn Qurra as a link between Greek and Latin mathematics. Doctoral dissertation. N.Y., 1968.

Shmidt [Schmidt], Aleksandr Eduardovich (1871-1939)

1. Nasîraddîn-at-Tûsiy (d. 672-1273) po voprosu o svobode voli. - Sbornik v chest' D.F.Kobeko. SPb. 1913, 169-176.

Shmidt, A.E., Subbotin, M.F. and Vyatkin V.L.

1. Mirza Ulug bek. Tash., 1925.

Shodiyev, T. and Marupov, N.

1. Chand suhan dar bobati "Qurozai tabiiyot"-i A.Sino. - Maktabi soveti. 1971, No 4, 46-49.

Shuja, F. M.

1. Cause of Refraction as Explained by the Moslem Scientists. Delhi, 1936.

Shumovskiy, Teodor Adamovich

1. Tri neizvestnyye lotsii Ahmada ibn Majida, arabskogo lotsmana Vasko de Gamy. M.-Lg., 1957; re-ed. in "Mathematical Geography" [10], F.M., 1992.
2. Três roteiros desconheicidos de Ahmad ibn Madjid o piloto arabe de Vasco de Gama. Lisboa, 1960.
3. Fifteen Century Arabian Marine Encyclopaedia. - Trudy XXV Mezhdunar. kongressa vostokovedov (M., 1960). 2. M., 1963, 127-134.
4. Araby i more. Po stranitsam rukopisey i knig. M., 1964.
5. Araby i more. Predystoriya deyatel'nosti Ahmada ibn Majida, lotsmana Vasko de Gamy. ADD (i). Lg., 1967.
6. Arabskoye moreplavaniye. - Ocherki istorii arabskoy kul'tury V-XV vv. M., 1982, 357-411.
7. Araby i more. - Ibn Majid [3], 1, 1985, 15-176.
8. "Kniga pol'z" v tvorchestve Ahmada ibn Majida. - Ibn Majid [3], 1, 1985, 177-200.
9. "Kniga pol'z" v nauke Novogo vremeni. - Ibn Majid [3], 1, 1985, 201-208.
10. Vneshniye pokazateli pukopisey "Knigi pol'z". Podgotovka izdaniya. - Ibn Majid [3], 1, 209-238.

Sibt al-Maridini (No 873)

1. Kifaya al-kanu` fi'l-`amal bi'l-rub` al-maqṭu`. Istanbul, 1274 h. [1858].
2. Luqta al-jawahir fi'l-khuṭuṭ wa'l-dawair. al-Qahira, 1293 h. [1876].
3. Maṭlab fi'l-rub` al-mujayyab. al-Qahira, 1309 h. [1892].

Siddiqi, A.

1. Catalogue of Arabic, Persian and Urdu Manuscripts presented to the Dhaka University Library. - Commemoration of the visit to the University of Lord Irwin, General Governor of India. Dhaka, 1929.

Siddiqi, Akhtar H.

1. Al-Biruni (Geography). - ENWC. 1997, 158-159.

Siddiqi, Bakhtyar Husain

1. Jalal al-Din Dawwani. - A History of Muslim Philosophy. 2. Wiesbaden, 1966, 863-888.

Siddiqi, M. R.

1. Mathematics and Astronomy. - A History of Muslim Philosophy. 2. Wiesbaden, 1966, 1277-1292.

Siddyqov, Khalil Siddyq ughli (1916-1988)

1. Khorazm mutafakkirlari fan wa din haqida. Toshkent, 1960.
2. Mahmud ibn Muhammad ibn Umar al-Chaghminiy. - Uch. zap. Khorezm. ped. in-stituta. 1, 1964, 180-187.
3. Khorazmiy ulugh matematik olim. - Sovet maktabi. 1964, No 12, 39-43.
4. Mahmud ibn Muhammed ibn Omar al-Chagmini al-Khorezmi - velikiy uchonyy sred-nevekov'ya. - Vestnik Kara-Kalpak. filiala AN Uz. SSR. 1965, No 4, 49-52.
5. Ranniye spiski traktatov al-Chagmini i Ali Kushchi. - Vestnik Kara-Kalpak. filiala AN Uz. SSR. 1967, No 3-4, 157-158.
6. Rol' uchonykh drevnego Khorezma v razvitii tochnykh nauk. - Vestnik Kara-Kalpak. filiala AN Uz. SSR. 1967, No 2, 3-14.
7. O nauchnom tvorchestve khorezmskogo astronoma i matematika XII-XII vv. Mahmuda al-Chagmini. - "Iz istorii" [2], 1972, 200-206.
8. Chaghminiy wa uning utmishdashlari. Toshkent, 1976.
9. Urta Osiyo, Yaqin wa Urta Sharq olimlarining ishlarida geometriya. Toshkent, 1981.
10. Muhammad al-Khorezmi - tvorets algebry. - "al-Khwarizmi" [4], 1985, 152-154.

Sidi Rais (No 977)

1. Mir'at al-mamalik. Dar-i Sa`adat, 1313 h. [Istanbul, 1895].
2. Die topographische Capitel des indischen Seespiegel Mohit. Übers. von M.Bittner, mit einer Einleitung von W.Tomaschek. Wien, 1897.
3. Mir'at al-Mamalik. Transl. A.Vambery, L., 1899.
4. Seydi Ali Rais. Mir'otul mamolik (Mamlakatlar kuzgusi). Tarjima wa izohlar Sh. Zunnunovniki. Toshkent, 1963.

Siggel, Alfred

1. Das Buch des al-Urmajuni über die Konstruktion der astronomischen Instrumenten. - QSNM. 8, 1941-1942, 435-457.
2. Das Buch der Gifte des Ğabir al-Hayyan. Arabischer Text in Faksimile (Hs. Taymur, Tibb. 393, Kairo). Übers. und erläutert von A.Siggel. Wiesbaden, 1958.

"Significance"

1. The Significance of Islamic Manuscripts. Proceedings of the Inaugural Conference at al-Furqan Islamic Heritage Foundation (30th November - 1st December 1991). Ed. J.Cooper. L., 1992.

al-Sijzi (No 292)

1. Risala fi ma`rifa al-khaṭṭayn al-mustaqim wa'l-munhani. Nashara Gurgis `Awwad. - Sumer. 7, 1951, 1-29.
2. Fi kayfiyya tasawwur al-khaṭṭayn alladhayn yaqriban wa la yaltaqiyan. Nashara Rushdi Rashid. - AIHS. 37, 1987, No 119, 280-296.
3. Kniga ob izmerenii sharov sharami. Per. i prim. B.A.Rozenfel'da i R.S.Safarova. - IMI. 29, 1985, 326-333.
4. Al-Sijzi's Treatise on Geometrical Problems. With the Original Arabic Text. With the Persian Translation of the Original Text by Mohammed Bagheri. Translated from the Arabic, Annotated, and with the Introduction by Jan P. Hogrndijk. With an Arabic Translation of Hogendijk's Introduction and Annotations. Tehran, 1996.

Simon, G.

1. L'Optique d'Ibn al-Haytham et la tradition ptoléméenne. - ASP. 2, 1992, No 2, 203-236.

Simon, H.

1. Zum Universalienproblem in der arabischen Philosophie. - Trudy XXV Mezhdunar. kongressa vostokovedov (M., 1960). 2, 1963, 63-69.

Simon, Max (1863-1909)

1. Zu Hwarizmi's hisab al ğabr wal muqabala. - Archiv der Mathematik und Physik (3). 18, 1911, 202-203.

Simsar, Muhammed Ahmad

1. Oriental Manuscripts of the John Frederick Lewis Collection in the Free Library of Philadelphia, 1937.

Singer, H. R.

1. Ibn Baskuwal (Pascual). - LM. 5, 1990, 315.
2. Ibn Haldun. - LM. 5, 1990, 316-317.
3. Ibn Hazm. - LM. 5, 1990, 318.

al-Siqilli (No 478)

1. Risala fi'l-mukhula li-ma`rifa awqat al-sayha. Nashara L.Shaykhu. - Mashriq. 10, 1907, 76-89.

Sirajev (Sirojov), F.

1. Kontseptsiya Sinoii qadimii olam. - IAN Taj. SSR, otd. obshch. nauk. 1980, No 2, 27-34.
2. Problema izvechnosti mira v filosofii Ibn Sina. - "Ibn Sina" [16], 1981, 104-120.

Sirajdinov [Sirojiddinov], Saghdy [Sa`di] Hasan ughli (1919-1988)

1. O vychislenii sinusa odnogo gradusa v samarkandskoy shkole Ulugbeka. - "Iz istorii" [3], 1979, 65-109.

Sirajdinov, S. H. and Ahmedov, A. A.

1. Nekotoryye voprosy matematiki i astronomii v "Kanone Mas'uda" Beruni. - ONU. 1973, No 7-8, 50-64.
2. Iz biografii Ibn Siny. - "Ibn Sina" [14], 1981, 3-15.
3. Fiziko-matematicheskiye vozzreniya Abu Ali ibn Siny. - "Ibn Sina [15], 1981, 87-95.
4. Velikiy uchonyy-entsiklopedist iz Khorezma. - "al-Khwarizmi" [4], 1985, 25-29.
5. On the Contribution of the Central Asian Scientists in Mathematics and Astronomy in IX-XV Centuries. - "Scientific Changes" [1], 1985, 70-72.

Sirajdinov, S. H. and Matviyevskaya, G. P.

1. O matematicheskikh rabotakh shkoly Ulugbeka. - "Iz istorii" [1], 1965, 173-199.
2. Matematicheskoto nasledstvo na uchenite ot Sredna Aziya ot 9. do 15. vek. - Fiz.-mat. spisaniye. 15, 1972, 209-216.
3. Buyuk mutafakkirning matematik merosi. Forobiy tavalludining 1100 yilligiga. - Sharq yulduzi. 1975, No 12, 152-156.
4. Ob izuchenii istorii matematiki v Sredney Azii. - IMI. 21, 1976, 51-60.
5. Abu Rayhan Beruni. M., 1978.
6. Muhammad ibn Musa al-Khorezmi i yego vklad v razvitiye mirovoy nauki. M., 1982.
7. Muhammad ibn Musa al-Khorezmi - vydayushchiysya matematik i astronom sredne-vekov'ya. M., 1982.
8. Muhammed ibn Musa al-Khorezmi i yego vklad v istoriyu nauki. - VIYT, No 1, 1983, 108-119.
9. Al-Khorezmi i yego "Algebra". - "al-Khwarizmi" [1], 1983, 75-94.

Sirajdinov, S. H., Matviyevskaya, G. P., and Ahmedov, A.

1. Matematika i astronomiya v rabotakh Abu Rayhona Beruni. Tash., 1973.
2. Beruniy - matematik va astronom. Toshkent, 1973.
3. L'héritage mathématique des savants de L'Asie moyenne des IX-XV^ème^ siècles et son exploration. - ACIHS XV (Edinburgh, 1977). 1977, 45.
4. Mathematical Heritage of IX-XV Centuries Middle Asian Scientists. 2. Moscow, 1977, 12-19.
5. Abu Ali ibn Sina i fiziko-matematicheskiye nauki. - Voprosy filosofii. 1980, No 9, 106-111.
6. O roli Ibn Siny v istorii razvitiya fiziko-matematicheskikh nauk. - IAN Uz. SSR, ser. fiz.-mat. nauk. 1980, No 5, 29-32.

Sircar, D. C.

1. Sewai Jaysingh of Amper, A.D. 1699-1743 - Indian Culture. 3, 1936-1937, 376-379.

Siyasi, `Ali Akbar

1. `Ilm-i nafs-i Ibn Sina wa tatbiq-i an ba riwanshinasi-yi jadid. La psychologie d'Avicenne et ses analogues dans la psychologie moderne. Tehran, 1333 s.h. - 1954.

Skladanek, Bogdan

1. Awicenna - uczony renesansu iranskiego. - Ibn Sina [44], XI-XLIII.

Slane, W. Mac Guckin de (1801-1878)

1. Catalogue des manuscrits arabes de la Bibliothèque Nationale. 1. P., 1883.

Smirnov, Vasiliy Dmitriyevich (1846-1922)

1. Obraztsovye proizvedeniya osmanskoy literatury v izvlecheniyakh i otryvkakh. Maj-mu`a-yi muntahabat-i athar `uthmaniyya. SPb. 1903.

Smith, A. Mark

1. Alhazen's Debt to Ptolemy's Optics. Boston Studies in the Philosophy of Science, 120, Nature, Experiment, and Science. Dordrecht, 1990, 147-164.
2. The Latin Version of Ibn Mu`adh's Treatise: "On Twilight and the Rising of Clouds". - ASP. 2, 1991, No 1, 83-132.
3. Extremal Principles on Ancient and Medieval Optics. - Physis, 31, 1994, No 1, 115-140.
4. Ibn Mu`adh. - ENWC. 1997, 426.
5. Alhacen's Theory of Visual Perception.- Transcations of the American Philosophical Society. 91, part 4, 5, 2001.

Smith, David Eugene (1860-1944).

1. Euclid, Omar Khayyam and Saccheri. - Scripta mathematica. 3, 1935, No 1, 5-10.

Smith, D. E. and Mourad, Salih

1. The Dust Numerals among the Ancient Arabs. - The Amer. Math. Monthly. 34, 1927, 258-260.

Smith, Julian A.

1. Arithmetic in Islamic Mathematics. - ENWC. 1997, 68-70.
2. Astrolabe. - ENWC. 1997, 74-75.
3. Compass. - ENWC. 1997, 232-233.

Smith, Margaret

1. Al-Ghazali the Mystic. A Study of the Life and Personality of Abu Hamid Muhammad al-Ghazali. L., 1944.

Sobernheim, Moritz

1. Ibn Iyas. - EI. 2, 1927, 390-391.
2. Ibn Iyas. AI. 5, 1952, 758-759,

Sobirov, Gadoyboy Sobirovich (1935-1976)

1. "Khulosat-ul-hisob" Bahoeddina. - Voprosy istorii i metodiki elementarnoy mate-matiki. 1. Dushanbe, 1962, 5-16.
2. Analiz tvorchestva Alaeddina ibn Muhammeda Ali al-Kushchi i yego deyatel'nosti v razvitii matematicheskoy nauki na Srednem i Blizhnem Vostoke. ADK (fm). M., 1963.
3. Analiz matematicheskikh trudov al-Kushchi. - Voprosy istorii i metodiki elemen-tarnoy matematiki. 2. Dushanbe, 1965, 34-55.
4. Polozhitel'nyye i otritsatel'nyye chisla u al-Kushchi. - Voprosy istorii i metodiki elementarnoy matematiki. 2. Dushanbe, 1965, 72-77.
5. Inkishofi matematika dar Osiyoi Miyona (XV-XVII asrho). Dushanbe, 1966.
6. Vliyanie idey Kopernika i Keplera na Vostoke v kontse XVII i nachale XVIII vv. - XIII Mezhdutar. kongress po istorii nauki. Materialy po istorii fiz.-mat. nauk. M., 1971, 38-39.
7. Metody opredeleniya sinusa odnogo gradusa na Blizhnem i Srednem Vostoke v XV-XVII vv. - ACIHS XIII (M., 1971). 3-4, 1974, 70-72.
8. Matematicheskiye metody v astronomicheskikh tablitsakh uchonykh Blizhnego i Sre-dnego Vostoka XV-XVII vv. (Srednyaya Aziya, Iran, Turtsiya i Severnaya Indiya). ADD (fm). Kazan', 1974.
9. Tvorcheskoe sotrudnichestvo uchonykh Sredney Azii v Samarkandskoy nauchnoy shkole Ulugbeka. Dushanbe, 1975.

"Sobraniye pravil"

1. Sobraniye pravil nauki astronomii. Kn. 3. O predlozhenii, osvobozhdayushchem ot sekushchikh, o neobkhodimom dlya nego i o vytekayushchem iz nego. Per. i prim. N.G.Khayr-etdinovoy. - FMSV. 2, 1969, 147-190.

"Sobraniye rukopisey"

1. Sobraniye vostochnykh rukopisey Akademii nauk Uzbekskoy SSR. 1-7. Pod red. A.A.Semyonova. Tash., 1952-1964. 8. Pod red. A.A.Semyonova i D.G.Voronovskogo. Tash., 1967. 9. Pod red. A.U.Urunbayeva i L.M.Yepifanovoy. Tash., 1971. 10. Pod red. D.G.Voro-novskogo. Tash., 1975. 11. Pod red. A.U. Urunbayeva i R.P.Jalilovoy. Tash., 1987 (SVR).

Sohrweide, H.

1. `Ali Qusği. - LM. 1, 1980, 411.

Sokolova, Yelena Ivanovna

1. Resheniye Ibn al-Haysama "zadachi Al'hazena". - Uch. zap. Tul'skogo gos. ped. ins-tituta. 1970, No 3, 57-63.

Sokolovskaya, Zinaida Kuz'minichna (b. 1927)

1. Nauchnyye instrumenty Ibn Siny. - "Ibn Sina" [14], 1981, 48-51; "Ibn Sina" [15], 1981, 135-142.
2. Rol' al-Khorezmi v razvitii tochnogo instrumentovedeniya na Blizhnem i Srednem Vostoke. - ONU, 1983, No 7, 64-72.
3. "Doteleskopicheskiy" period istorii astronomicheskikh instrumentov. Rol' al-Khorez-mi v razvitii tochnogo instrumentovedeniya na Blizhnem Vostoke. - "al-Khwarizmi" [4], 1985, 165-173.

Soonawala, M. F.

1. Maharaja Sawai Jai Singh II of Jaipur and his Observatories. Jaipur, 1950.

Soubiran, Andre

1. Avicenne, prince des médecins. Sa vie et sa doctrine. P., 1935.

Soucek, S.

1. Piri Re'is. - EI^2. 8. 1994, 308-309.

Souder, Lawrence

1. Habash al-Hasib. - ENWC. 1997, 392.

Souissi [Suwisi], Muhammed

1. Hisab al-ghubar. - EI^2. 3, 1967, 468-469.
2. La langue des mathématiques en arabe. Tunis, 1968.
3. Un mathématicien Tuniso-Andalou: Al-Qalasadi. - Colloquio Hispano-Tunesino. 2. 1970, 147-169.
4. Un texte d'Ibn al-Banna' sur les nombres parfaits, aboudants, déficients et amiables. - Internat. Congress of math. sciences. Karachi, 1975.
5. al-Qalasadi. - EI^2. 4, 1978, 476-477.
6. Le message scientifique d'al-Biruni et sa portée actuelle dans les pays musulmans. - "al-Biruni" [9], 1979, 765-775.
7. The "Munyat al-hussab" of Ibn-Gazi. - ISHAS 2, 1979, 77-78.
8. Présentation de la "Somme des Principes et des Conclusions" d'al-Hasan al-Marrakusi (XIIIe s.). - ACIHS XVI. 1, 1981, 67.
9. L'école mathématique maghrébine: quelques exemples de ses travaux et certaines de ses particularités. - "al-Multaqi" [1], 1986, 20-21.
10. Ba`d masail al-handasiyya wa hululha al-`arabiyya. al-Multaqi" [2], 1995, A87-A96.

Spies, Otto (1878-1966).

1. Die Bibliotheken des Hidschas. - ZDMG. 90, 1936, 83-120.
2. Al-Kindi's Treatise on the Cause of the Blue Color of the Sky. - J. of Bombay Branch of the Royal Asiatic Society. 7-9, 1937.

Spitta, Wilhelm (1853-1883)

1. Zur Geschichte al-Ash'ari's. Lpz., 1876.

Sprenger, Aloys (1813-1893).

1. The Copernican System of Astronomy among the Arabs. - JASB. 25, 1857,
2. A Survey of the Muhammedan Sciences. Calcutta, 1849.
3. Dictionary of Technical Terms. Calcutta, 1854.

Sproull, W. O.

1. Adab al-Katib von Ibn Quteiba. Dissertation. Lpz., 1877.

Spuler, Bertold

1. Hamd Allah al-Mustawfi al-Qazwini. - EI^2. 3, 1965, 122.

Stabile, Giorgio

1. Avicenna. - SeT. 1, 1975, 79-81.

Stamatis, Euangelos S. (1898-1990)

1. Ta eis ten arabiken eurethenta tessara nea biblia ton Arithmetikon tou Diophantou. - Platon. 28, 1976, 121-133.

Stapleton, Henry Ernest (1878-1926)

1. Probable Sources of the Numbers on which Jabirian Alchemy was Based. - AIHS. 32, No 22, 1953, 44-59.

Stebleva, Iya Vasil'yevna

1. Traktat Babura ob `aruze. - Babur [15], 1972, 13-42.

Stegemann, V.

1. Beiträge zur Geschichte der Astrologie. I. Der griechische Astrologe Dorotheos von Sidon und der arabische Astrologe Abu'l-Hasan `Ali ibn Abi'r-Riğal, genannt Albohazen. Heidelberg, 1935.
2. Dorotheos von Sidon und das sogenannte Introductorium des Sahl ibn Bisr. Prag, 1942.

Steinschneider, Moritz (1816-1907)

1. Die mittlere Bücher der Araber. - Zeitschr. für Mathematik und Physik. 10, 1865, 456-498.
2. Diophantos bei den Arabern im neunten Jahrhundert. - Zeitschr. für Mathematik und Physik. 10, 1865, 499.
3. Ğauberî's "entdeckte Geheimnisse", eine Quelle für orientalische Sittenschilderung. - ZDMG. 19, 1865, 562-577.
4. Al-Farabî (Alpharabius), des arabischen Philosophen Leben und Schriften. - Mémoires de l'Acad. Imp. des sciences de St.Pétersbourg (7). 13, No 14, 1869.
5. Thabit (Thebit) ben Korra. Bibliographische Notiz. - Zeitschr. für Mathematik und Physik. 18, 1873, 331-338.
6. Études sur Zarkalî. - BBSMF. 14, 1881, 171-182, 16, 1883, 493-513, 17, 1884, 765-794, 18, 1885, 343-360, 20, 1887, 1-36, 575-604.
7. Sur un ouvrage astronomique inédit d'Ibn Haitham. - BBSMF. 14, 1881, 721-740, 22, 1889, 505-513.
8. Die Sohne des Mûsa ben Schakir. - BM (2). 1, 1887, 44-48, 71-75.
9. Jûsuf ben Ibrahîm und Ahmed ben Jûsuf. - BM (2). 2, 1888, 49-52, 111-117.
10. Über eine lateinische Bearbeitung von Zarkalî's saphaea. - BM (2). 4, 1890, 11-12.
11. Die arabische Literatur der Juden. Ein Beitrag zur Literatur der Araber, grossenteils aus handschriftlichen Quellen. F. M., 1902; Hildesheim, 1964.
12. Die hebraischen Commentare zum "Führer des Maimonides". Festschrift zum 70. Geburtstage A.Berliners. F. M., 1903, 345-363.

Stephenson, H. F. and Said S.S.

1. Precision of Medieval Islamic Eclipse Measurements. - JHA. 22, 1991, No 3, 195-207.
2. Accuracy of Eclipse Observations in Medieval Arabic Chronicles. - JHA. 22, 1991, No 4, 297-310.

Stephenson, J.

1. Classification of the Sciences according to Nasiriddin Tusi. - Isis. 5, 1923, 329-338.

Stern, M. S.

1. Time in the Islamic World. - ENWC. 1997, 979-980.

Stern, S. M.

1. `Abd al-Rahman b. `Umar as-Sufi. - EI^2. I, 1954, 86-87.
2. A Treatise on the Armillary Sphere by Dunas ibn Tamim. - Homenaje à Millas Vallicrosa. 2. Barcelona, 1956, 373-382.
3. New Information about the Authors of the "Epistles of the Sincere Brethren". - Islamic Studies. 3, 1964, No 4.

Steward, Ch.

1. A Descriptive Catalogue of the Oriental Library of Tippoo Sultan of Mysore. Cambridge, 1809.

Stiegler, Karl

1. Ibn al-Haythams Entdeckung der apharischen longitudinalen Aberration. - Physis. 13, 1971, 5-12.

Stolyarova, Tat'yana Dmitriyevna

1. Traktaty Sabita ibn Korry po mekhanike. - TNKA X-XI(m), 1968, 29-30.
2. Traktat Sabita ibn Korry "Kniga o karastune". - "Iz istorii" [2], 1972, 206-210.
3. Stati-ka v stranakh Blizhnego i Srednego Vostoka v IX-XI vv. ADK (fm). M., 1973.
4. Statika na srednevekovom Vostoke. - ACIHC XIII (M., 1971). 3-4, 1974, 160-163.
5. Statika v stranakh Blizhnego i Srednego Vostoka v sredniye veka. - TNKA XVI(m), 1973, 43-49.

Storey, Charles Ambrose (1888-1967)

1. Al-Taftazani. - EI. 4, 1934, 653-656.
2. Persian Literature. A Bio-bibliographical Survey. 1:1-2. Qur'anic Literature; History and Biography. L., 1927-1953, 1972. 2:1. A. Mathematics. B. Weights and Measures. C. Astronomy and Astrology. D. Geography. L., 1958, 1972. 2:2. E. Medicine. L., 1971. 2:3. F. Encyclopaedias and Miscellanies. G. Arts amd Crafts. H. Science. J. Occult Arts. Leiden, 1977. 3:1. A. Lexicography. B. Grammar. C. Prosody and Poetics. Leiden, 1984. 3:2. D. Rhetoric, Riddles and Chronograms. E. Ornate Prose. Ox., 1990 (PL).
3. K.A.Isturi. Kitabha-yi riyadi. Tarjama u nigarish-i Taqi Binash. - NKMDT. 4, 1966, 13-51.
4. Persidskaya literatura. Bio-bibliograficheskiy obzor. Dopolnennyy russkiy perevod Yu.E.Bregelya. 1-3. M., 1972 (PL2).
5. Teftazanî. IA. 13, 1971, 118-121.

Story, W. E.

1. Omar Khayyam as Mathematician. Boston, 1918.

Strachey

1. History of Algebra. - Asiatic Researches. 12. Calcutta, 1827, 177-200.

Streck, Maximilian

1. al-Djubba'i. - EI. 1, 1913, 1057.
2. al-Kazwini. - EI. 2, 1927, 900-904.
3. Kazvînî. - IA. 6, 1954, 528-532.

Strohmaier, Gotthard

1. Hunayn b. Ishaq al-'Ibadi. - EI². 3, 1967, 578-581.
2. Das Verhältnis von Theorie und Praxis nach einer noch unbekannten Schrift al-Farabis. - ACIHS XIII. Tezisy, sektsiya No 4. M., 1971, 16.
3. The Nature of the Supralunar World - from Anaxagoras to Ibn al-Haitham - Studia Copernicana, 13, 1975, 17-20.
4. Ishaq b. Hunayn. - EI². 4, 1978, 110.
5. Platonische Psychologie in allegorischer Verkleidung von Avicenna bis Dante. - "Ibn Sina" [12], 1980, II, 51-61.
6. Die Sterne des 'Abd ar-Rahman as-Sufi. Lpz. - Weimar, 1984.

Strothmann, R.

1. Die Zwölfer-Schi'a. Zwei religionsgeschichtliche Charakterbilder aus der Mongolenzeit. Lpz., 1926.

Strothmann, R. and Ruska, J.

1. al-Tusi, Nasir al-Din. - EI. 4, 1934, 980-981.
2. Tûsî, al-Tusi Nasir al-Din. - IA. 12, 1972, 132-134.

Stroyls, John

1. Survey of the Arab Contributions to the Theory of Numbers. - ISHAS I. 1, 1977, 213; II, 1978, 173-181.

Struik, Dirk Jan (b. 1894)

1. Omar Khayyam Mathematician. - The Math. Teacher. 51, 1958, No 4, 280-285.
2. De tiendelige breuken bij Al-Kashi. - Simon Stevin. 33, 1959, No 2, 61-71.

"Strumenti"

1. Gli strumenti. Ed. G.L.E.Turner. Torino, 1991.

"Studies in Perception"

1. Studies in Perception: Interrelations in the History of Philosophy and Science. Ed. Peter K.Machamer and Robert C.Turnbull. Columbus, Ohio, 1978.

"Studies on al-Hamdani"

1. Studies on al-Hasan b. Ahmad al-Hamdani (d. 945). Collection of reprints ed. by Fuat Sezgin. F.M., 1993.

"Studies on al-Idrisi"

1-4. Studies on al-Idrisi 1-4. Collection of reprints ed. by Fuat Sezgin. F.M., 1992.

"Studies on Ibn Hauqal and al-Iṣṭahri"

1. Studies on Ibn Hauqal and al-Iṣṭahri. Collection of reprints ed. by Fuat Sezgin. F.M., 1992.

"Studies on al-Qazwini"

1-2. Studies on Zakariya' b. Muhammad al-Qazwini. 1-2 - Collection of reprints ed. by Fuat Sezgin. F.M., 1994.

"Studies on the Travel Accounts"

1. Studies on the Travel Accounts of Sallam at-Tarğuman, Harun b. Yahya and as-Sindibad al-Bahri - Collection of reprints ed. by Fuat Sezgin. F.M., 1994.

"Studies on al-Ya`qubi"

1-2. Studies on al-Ya`qubi, Ibn Rusṭah and al-Maqdisi (al-Muqaddasi). - Collection of reprints ed. by Fuat Sezgin. F.M., 1992.

Subbotin, Mikhail Fyodorovich (1893-1966)

1. Astronomicheskiye raboty Ulugbeka. - Mirza Ulugbek. Tash., 1925.
2. Raboty Muhammeda Nasireddina po teorii dvizheniya Solntsa i planet (XIII v.). - IAN Azerb. SSR. 1952, No 5, 51-58.

Suchkova, Galina Gavrilovna

1. Ucheniye Ibn Siny o prostranstve i vremeni. - IAN Taj. SSR, otd. obshch. nauk. 1980, No 3, 25-30.

al-Sufi (No 212)

1. `Abd al Rahman al-Sûfî. Description des étoiles fixes. Trad. par H.C.F.C. Schjellerup. SRb., 1874; rééd. par Fuat Sezgin avec introduction en français et arabe. F.M., 1986.
2. Suwar al-kawakib. Suwaru'l-Kawakib, or Uranometry. Haydarabad, 1373 h. - Hyderabad, 1954.
3. Kitab al-`amal bi'l-asturlab. Haydarabad, 1382 h. [1962].
4. Kitab suwar al-kawakib al-thamaniyya wa'l-arba`in. Abu'l-Husayn `Abdu'r-Rahman as-Sufi. Suwaru'l-kawakib or Uranometry (Description of the 48 constellations). Arabic Text with the Urjuza of Ibnu's-Sufi. Beirut, 1401 h. [1981].
5. Kitab al-`amal bi'l-asturlab. Risala fi'l-`amal bi'l-asturlab. Two Books on the Use of the Astrolabe. Introduction in Arabic and English by Fuat Sezgin. - F.M., 1986.
6. Kitab suwar al-kawakib. The Book of Constellations. Introduction in Arabic and English by Fuat Sezgin. - F.M., 1986.

al-Suhrawardi (No 497)

1. Kitab hikma al-ishraq. Tehran, 1316 h. [1898]; 1371 h. [1952].
2. Shihab ad-Din Suhrawardi. Opera metaphysica et mystica. 1-2. Istanbul - Paris, 1945-1952.

Suhrawardy, A. al-Ma'mun

1. Notes of Important Arabic and Persian Manuscripts Found in Various Libraries in India. - J. of Asiatic Society of Bengal. 13, 1917, 77-139.

Sultanov, Mammadagha Sultan oghlu

1. Nasiraddinin "Ahlaqi Nasiri" asari haqqynda. O proizvedenii Nasiréddina "Ahlagi-Nasiri". - "al-Tusi" [1], 1951, 31-35, 62-66, ?5-94.
2. Azarbayjan SSR elmlar Akademijasy Respublika aljazmalary fondu. Aljazmalary katalogu. I. Baky, 1963.

Sultanov, Mohirkhuja

1. Ahamiyati "Risolai sarguzasht" dar omuzishi ahwol wa osori Ibni Sino. Dushanbe, 1980.

2. Ibni Sino wa osori tojikii u. - IAN Taj. SSR, otd. obshch. nauk. 1980, No 2, 35-39.

Sultanov, Rahim Sultan oghlu

1. Nasiraddin Tusi wa onun "Ahlaqi-Nasiri" asari. - al-Tusi [19], 1980, 3-31.

Sultanov, Rustam Maqsun oghlu

1. Nasireddin Tusi o postulate parallel'nosti. - IAN Azerb. SSR. 1951, No 10, 53-62.

Sultonov, Umarbek

1. Filosofskiye i sotsial'no-eticheskiye vzglyady Abu Ali Ibn-Siny. ADK (fs). Dushanbe. 1972.
2. Aqidahoi falsafi ijtimoi wa ahloqii Abuali Ibni Sino. Dushanbe, 1975.
3. Muosironi Abuali Ibni Sino. Dushanbe, 1980.

Süssheim, Karl (1878-1947)

1. Aus anatolischen Biblioteken. - Beiträge zur Kunde des Orients. 7, 1909, 77-88.
2. `Ali (Sidi `Ali) b. Husain. - EI. 1, 1913, 301-302.

Suter, Heinrich (1848-1922).

1. Der V. Band des Katalogs der arabischen Bücher der vizeköniglichen Bibliothek in Kairo. - Zeitschr. für Math. und Physik. Hist.-lit. Abteilung. 38. 1893, 1-24, 41-57, 161-184; [54], I, 407-471.
2. Nachtrag zu meiner Übersetzung des Mathematiker-Verzeichnisses im Fihrist des Ibn Abû Ja'qûb al-Nadîm. - Zeitschr. für Math. und Physik. Hist.-lit. Abteilung, 38. 1893, 126-127; [54], I, 405-406.
3. Zur Geschichte der Trigonometrie. - BM (2). 7, 1893, 1-8; [54], II, 5-12.
4. Die Araber als Vermittler der Wissenschaften in deren Übergang vom Orient in den Occident. Jahresheft 25 des Vereins schweizerischer Gymnasiallehrer, 2. Aufl. Aarau, 1896; [54], II, 16-45.
5. Die Kreisquadratur des Ibn el-Haitams. Zum ersten Mal nach den Manuskripten der königl. Bibliothek in Berlin und des Vatikans herausgegeben und übersetzt. - Zeitschr. für Mathematik und Physik. Hist.-lit. Abteilung, 44. 1899, 33-47; [54], II, 76-90.
6. Zur Frage über die Lebenszeit des Verfassers des Mulahhas fi'l hei'a, Mahmûd b. Muh b. `Omar al-Ğagmînî. - ZDMG. 53, 1899, 539-540; [54], II, 99-100.
7. Die Mathematiker und Astronomen der Araber und ihre Werke. - AGMW. 10, 1900; AnnArbor, 1963.; [54], I, 1-285 (MAA).
8. Das Rechenkunst des Abû Zakarîya al-Hassar. - BM (3), 2, 1901, 12-40; [54], II, 115-143.
9. Nachträge und Berichtigungen zu "Die Mathematiker und Astronomen der Araber und ihre Werke". - AGMW. 14, 1902, 157-182; [54], I, 286-314 (MAA^2).
10. Über die Geometrie der Sohne des Mûsa b. Shakir. - BM (3). 3, 1902, 259-272; [54], II, 144-157.
11. Über die im "Liber augmenti et dimintionis" vorkommenden Autoren. - BM (3). 3, 1902, 350-354; [54], II, 158-162.
12. Der Verfasser des Buches "Gründe der Tafeln des Chowarezmî". - BM (3). 4, 1903, 127-129; [54, II, 174-176.
13. Zur Geschichte der Mathematik bei den Indern und Arabern. - Verhandl. des III. Intern. Mathem.-Kongr. zu Heidelberg (1904). Lpz., 1904, 556-561; [54], II, 182-187.
14. Zu dem Buche "De superficierum divisionibus" des Muhammed Bagdadinus. - BM (3). 6, 1905, 321-322; [54], II, 188-189.
15. Über das Rechenbuch des Alî ben Ahmed el-Nasawî. - BM (3). 7, 1906/07, 113-119; [54], II, 191-197.
16. Über den Kommentar des Muhammed ben `Abdelbaqî zum zehnten Buche des Euclides. - BM (3). 7, 1906/07, 234-251; [54], II, 198-215.
17. Einige geometrische Aufgaben bei arabischen Mathematikern. - BM (3). 8, 1907/08, 23-36; [54], II, 217-230.
18. Die Abhandlung Qosta ben Lûqas und zwei andere anonyme über die Rechnung zwei Fehlern und mit der angenommenen Zahl. - BM (3). 9, 1908/09, 111-122; [54], II, 231-242.
19. Die Abhandlung des Abû Kamil Shoğa` ben Aslam "Über das Fünfeck und Zehneck". BM (3). 10, 1909/10, 15-42; [54], II, 247-274.
20. Zur Trigonometrie der Araber. - BM (3). 10, 1909/10, 156-160; [73], II, 275-279.
21. Das Buch der Auffindung der Sehnen im Kreise von Abû'l-Raihan Muh. el-Bîrûnî. - BM (3). 11, 1910/11, 11-78; [54], II, 280-347.
22. Das Buch der Seltenheiten der Rechenkunst von Abû Kamil el-Misrî. - BM (3). 11, 1910/11, 100-120; [54], II, 348-368.
23. Die Abhandlung über die Ausmeessung des Paraboloides von el-Hasan b. el-Hasan b. el-Haitham. - BM (3). 12, 1911/12, 289-332; [54], II, 369-412.

24. `Abd al-Rahman al-Sufi. - EI. 1, 1913, 60-61.
25. Abu Ma`shar. - EI. 1, 1913, 99-100.
26. Abu'l-Wafa. - EI. 1, 1913, 112-113; EI^2. 1, 1954, 159.
27. al-Badi' al-Asturlabi. - EI. 1, 1913, 571; EI^2. 1, 1954, 858.
28. Djabir ibn Aflah. - EI. 1, 1913, 1029; EI^2. 2, 1954, 357.
29. al-Djaghmini. - EI. 1, 1913, 1038.
30. Die astronomischen Tafeln des Muhammed ibn Mûsa al-Khwarizmî in der Bearbeitung des Maslama ibn Ahmed al-Madjrîtî und der lateinischen Übersetzung des Athelhard von Bath, auf Grund der Vorarbeiten von A.Björnbo und R.Besthorn in Kopenhagen, herausg. und komm. von H.Suter in Zürich. - Mémoires de l'Acad. Royale des sciences et des lettres de Danemark. (7), section des lettres. 3, No 1. Copenhague, 1914; [54], I, 473-751.
31. Über die Ausmessung der Parabel von Thabit ben Kurra al-Harranî. - SBPNS. 48/49, 1916/17, 65-86; [54], II, 413-434.
32. Die Abhandlungen Thabit ben Kurras und Abû Sahl al-Kûhîs über die Ausmessung der Paraboloide. - SBPMS. 48/49, 1916/17, 186-227; [54], II, 435-476.
33. Abhandlung über die Ausmessung der Parabel von Ibrahîm b. Sinan b. Thabit aus dem Arabischen übersetzt und kommentiert. - Vierteljahrschrift der Naturforschenden Gesellschaft in Zürich. 63, 1918, 214-228; [54], II, 477-491.
34. Beiträge zu den Beziehungen Kaiser Friedrichs II zu zeitgenössischen Gelehrten der Osten und Westen, insbesondere zu dem arabischen Enzyklopädisten Kemal ed-dîn ibn Jûnis. - AGNM. 4, 1922, 1-8; [54], II, 542-549.
35. Über die Projektion der Sternbilder und der Länder von al-Bîrûnî. - AGNM. 4, 1922, 79-93; [54], II, 620-634.
36. Das Buch der geometrischen Konstruktion des Abûl 'Wefa. - AGNM. 4, 1922, 94-109; [54], II, 635-650.
37. Über den Gnomonschatten und Schattentafel. Hannover, 1923.
38. Al-Farghani. - EI. 2, 1927, 66-67.
38a. Hisab. - EI. 2, 1927, 315-316.
39. Ibn al-Haitham. - EI. 2, 1927. 405-406.
40. Ibn Abi'l-Ridjal. - EI. 2, 1927, 378-379.
41. Ibn al-Sa`ati. - EI. 2, 1927, 413.
42. Ibn Yunus. - EI. 2, 1927, 428-429.
42a. Ishak ibn Hunain. - EI. 2, 1927, 573
42b. al-Djabr wa'l-mukabala. - EI. 2, 1927, 989-990.
43. al-Kabisi. - EI. 2, 1927, 593-594.
44. Al-Karkhi. - EI. 2, 1927, 764-765.
45. al-Kashi. - EI. 2, 1927, 789.
46. al-Khaiyat. - EI. 2, 1927, 938.
47. Ebülvefa. - IA. 4, 1956, 91-92.
48. Ferganî. - IA. 4, 1956, 565.
49. Hayyat. - IA. 5, 1958, 395.
50. Ibn Ebirrical. - IA. 5, 1958, 729.
51. Ibn Yûnus. - IA. 5, 1958, 836-837.
52. Ibnüssa'atî. - IA. 5, 1958, 873-874.
53. Kaşî. - IA. 6, 1960, 412-413.
54. Beiträge zur Geschichte der Mathematik und Astronomie im Islam. 1-2. Mit Vor-wort von Fuat Sezgin in Deutsch und Arabisch. F. M., 1986.

Suter, H. and Ben Cheneb, M.

1. Ibn al-Banna'. - EI. 2, 1927, 390.
2. Ibnülbenna. - IA. 5, 1958, 846-847.
3. Ibn al-Banna' al-Marrakushi. - EI^2. 3, 1970, 731.

Suter, H. and Vernet, J.

1. al-Farghani. - EI^2. 2, 1965, 793.
2. al-Djaghmini. - EI^2. 2, 1965, 378.
3. Ibn al-Sa`ati. - EI^2. 3, 1970, 921.

Suter, H., Wiedemann, E., and Rescher, O.

1.Über al-Bîrûnî und seine Schriften. - Beiträge zur Geschichte der Naturwissenschaften LX. SMPMS. 52-53, 1920-1921 [1922], 55-96; Suter [54], II, 492-533.

Suter, H. and Samsó, J.

1. al-Khayyaṭ. - EI². 4, 1978, 1162.

al-Suyuti (No 896)

1. Husn al-muhadara fi akhbar Misr wa'l-Qahira. al-Qahira, 1277 h. [1860], 1299 h. [1882], 1321 h. [1903], 1323 h. [1905], Bombay, 1309 h. [1892], Fas, 1317 h. [1899].
2. Kanz al-`ummal fi thubut sunan al-aqwal wa'l-af'al. 1-8. Haydarabad, 1312-1313 h. [1895-1896].
3. Bughya al-wu`at fi tabaqat al-lughawiyin wa'l-nuha. al-Qahira, 1326 h. [1908].
4. As-Suyûtî's Who's Who in the Fifteenth Century, Nazm ul-l'cyan fî A'yan il-a'an. N.Y., 1927.
5. Bughya al-wu`at fi ṭabaqat al-lughawiyin wa'l-nuha. Nashara Muhammad A.Ibra-him. 1-2. al-Qahira, 1384-1385 h. [1964-1965].
6. Islamic Cosmology. A Study of as-Suyûtî's "al-Hay'a as-Sanîya fi'l-hay'a as-sunnîya" with critical edition, translation, and comm. by Anton Heinen. Beirut, 1982.
7. Kashf al-salsala `an wasf al-zalzala (Traktat o zemletryaseniyakh). Per. i prim. Z.M.Buniyatova i D.A.Iskenderova. Baku, 1983.

Suzuki, Takanori

1. A Solution of the Qibla-problem by Abu'l-Qasim Ahmad ibn Muhammad al-Ghandajani. - ZGAIW. 4, 1987/88, 139-148.

Swami Govinda, Tirtha

1. The Nectar of Grace. 'Omar Khayyam's Life and Works. Allahabad, 1941.

Swerdlow, Noël (b. 1941)

1. Al-Battani's Determination of Solar Distance. - Centaurus. 17, 1972, 97-105.
2. Jabir ibn Aflah's Interesting Method for Finding the Eccentricities, and Direction of the Apsidal Line of a Superior Planet. - "From Deferent to Equant" [1], 1987, 501-512.

"Syrie de Byzance à l'Islam"

1. La Syrie de Byzance à l'Islam. Éd. P.Canivet et J.-P.Rey-Coquais. Lyon, 1992.

"Syrie. Mémoires et Histoire"

1. Syrie. Mémoires et Civilisation. Ed. S.Cluzan, E.Delpont et J.Mouliérac. P., 1993.

al-Tabari (No 27)

1. Omar Tiberiadis de nativitatibus et interrogationibus. Venetiis, 1503.

al-Tabari (No 72)

1. Firdausu'l-Hikmat or Paradise of Wisdom. Ed. by M.Z.Siddiqi. B., 1928.

al-Tabari, Abu Ja`far Muhammad (839-923)

1. At-Tabari quos scripsit. Ser. III., Rec. M.S.De Goeje et al. 1-2, Lugduno-Batavorum, 1879-1880.

al-Tabari (No 301)

1. Muhammad ibn Ayyub Ṭabari, Shumar-nama. Ba muqaddima wa ta`liqat-i Taqi Binash. Tehran, 1344 s.h. [1965].
2. Muhammad ibn Ayyub Tabari. Miftah al-mu`amilat. Ba kushishi duktur Muhammad Amin Riyahi u ba muqaddima wa ta`liqat-i Taqi Binash. Tehran, 1349 s.h. [1970].

Ṭabaṭabai, Muhammad Muhit

1. Nama-yi pisar ba pidar. - Amuzish u parwarish. 10, 1319 s.h. [1940], No 3, 9-16, 59-62.
2. Zaban-i Khwarizmi. - "al-Khwarizmi" [3], 1984, 25-45.

al-Ṭabbakh, Muhammad Raghib

1. Dur al-kutub fi Halab qadiman wa hadithan. - Majalla Majma` al-lugha al-`arabiyya bi-Dimashq. 15, 1937, 299-310.

Taeschner, Franz

1. Die geographische Literatur der Osmanen. - ZDMG. 2 (77), 1923, 31-80.
2. Ashiḳ. - EI². 1, 1954, 697-698.

al-Taftazani (No 772)

1. Matn tahdhib al-manțiq wa'l-kalam. al-Qahira, 1376 h. [1953].

Tagdisi, J. G. and Aliyev, S. J.

1. O svyazi filosofii i meditsiny v trudakh Ibn Siny. - "Ibn Sina" [10], 1980, 39-41.

Tagi-zade, Asif Qadyr oghlu (b. 1938)

1. Ibn Turk i yego algebra. - TNKA XIV (m), 1971, 26-34.
2. Traktat al-Sagani o sovershennoy proyektsii. XIII MKIN. Materialy po istorii fiz.-mat. nauk. M., 48-49.
3. Matematicheskiye metody, primenyavshiyesya pri izgotovlenii astronomicheskikh in-strumentov uchonymi srednevekovogo Vostoka posle al-Biruni. - TNKA XVI(m), 1973, 57-69.
4. Astrolyabii al-Sagani, al-Biruni, al-Sijizi i al-Zarkali. - ACIHS XIII (M., 1971). 3-4, 1974, 143-146.
5. Matematicheskiye metody, primenyavshiyesya pri konstruirovanii astronomicheskikh instrumentov na srednevekovom Vostoke. ADK (fm). M., 1974.
6. Iz istorii izobreteniya astrolyabii. - VIYT. 49, 1975, 45-48.
7. Kvadranty srednevekovogo Vostoka. - IAI. 13, 1977, 183-199.

Tagi-zade, A.K. and Shubina, Lidiya Petrovna

1. Matematicheskiye voprosy v traktate al-Marakishi "Kniga sobraniya nachal i rezul'-tatov, okhvatyvayushchaya vse traktaty i postroeniya". - TNKA XV(m), 1972, 82-85.

Tagi-zade, A. K. and Vahabov, S. A.

1. Astrolyabii srednevekovogo Vostoka. - IAI. 12, 1975, 189-204.

Taha, Mahjub

1. Observations of Ibn al-Haytham's Treatise on the Light of Planets. - ISHAS 1. I, 1977, 295-299; II, 1978, 182.

Tahirjanov, Abdurahman Tahirovich

1. O dvukh redaktsiyakh "Majma` al-gharaib" (Sobraniye redkostey) i o date smerti yego avtora. - IAN Taj. SSR, otd. obshch. nauk. I, 1958, 21-25.
2. Opisaniye tajikskikh i persidskikh rukopisey Vostochnogo otdeleniya biblioteki LGU. Lg., 1962.

Tahirova, Natal'ya

1. Athar al-kitaba al-`arabiyya fi Daghistan. - AJ. 4, 1989, 177-192.

Tajikova, Klara Hajim kyzy

1. Al'-Farabi i Yasawi - predstaviteli dvykh napravleniy v srednevekovom panteizme. - "al-Farabi" [2], 1975, 170-176.

Talass, M. A.

1. Al-Mahțuțat wa hazainha fi Halab. - MMMA. 1, 1955, 8-36.
2. Al-Mahțuțat al-hazain al-hassa fi Halab. - MMMA. 2, 1956, 246-253.

Tallgren-Tuulio, O. J.

1. Le géographe arabe, Idrisi et la toponymie baltique de l'Allemagne. - Ann. Acad. Sci. Fenn., Helsinki, ser. B, 1930, 1934, 258-272; "Studies on al-Idrisi" [3], 1992, 351-365.
2. Du nouveau sur Idrisi. Sections VII 3, VII 4, VII 5; Europe septentrionale et circumbaltique, Europe orientale et d'après quelques manuscrits, centrale, jusqu'à la péninsule balkanique au Sud. Édition critique, traduction, études. Helsinki, 1936; "Studies on al-Idrisi" [4], 1992, 1-267.

Tallgren-Tuulio, O. J. and Tuulio, Aarne M.

1. Idrisi: La Finlande et les autres pays baltiques orientaux (Géographie, VII 4). Édition critique du texte arabe, avec facsimilés de tous les manuscrits connus, étude de la toponymie, aperçu historique, cartes et gravures ainsi qu'un appendice donnant le texte de VII 3 et de VII 5. Helsinki, 1930; "Studies on al-Idrisi" [3], 1992, 85-260.

Tanaka, Ichiro

1. Alhazen's Optics and the Nature of Light. - ACIHS XIV (Tokyo, 1974), 2, 1975, 91-93.

Tancî, Muhammed

1. Şehristânî. - IA. 11, 1968, 393-396.
2. Beyrûnî'nin İbn Sînâ'ya yöneltiği bazı sorular, İbn Sînâ'nın cevapları ve bu cevaplara Beyrûnî'nin itirazları. - "al-Biruni" [11], 1974, 231-301.

Tarbiyat, M. A.

1. Danishmandan-i Adharbayjan. Tehran, 1314 s.h. [1935].

Tasbihi, Mohammed Hossein

1. Catalogue of the Manuscripts in the Ganjbaksh Library of Iran-Pakistan Institute of Persian Studies. Rawalpindi, 1971.

Taşköpri-zade [Tashkubri-zada] (No 974)

1. Mawdu'at al-'ulum miftah al-sa'ada. İstanbul, 1313 h. [1895].
2. Miftah al-sa'ada wa misbah al-siyada li-mawdu'at al-'ulum li'l-mawla Ahmad ibn Muşṭafa al-ma'ruf bi-Ṭashkubrizada. 1-2. Haydarabad, 1328-1329 h. [1910-1911].
3. Der Seadet. Übers. O.Rescher. Stuttgart - Istanbul, 1937.
4. Miftah al-sa'ada. Nashara Abu'l-Nur Bakri. al-Qahira, 1382 h. [1963].

Taton, René (b. 1915)

1. La science antique et médiévale. P., 1957.
2. Ancient and Medieval Science from the Beginning to 1450. N.Y., 1967:

Tawkelev, Aydarat Nurekel uly and Saparghaliyev, Ghayrat Saparghali uly

1. Gosudarstvenno-pravovyye vzglyady al'-Farabi. Alma-Ata, 1975.

Tavadia, J. C.

1. Al-Biruni and Firdousi. - Visvabharati Quaterly. 15, 1949-1950, 51-59.
2. Al-Biruni and Orientalistics. - "al-Biruni" [4], 1951, 287-291.

al-Tawanisi, Abu'l-Futuh Muhammad

1. Abu'l-Rayhan Muhammad ibn Ahmad al-Biruni. al-Qahira, 1967.

Teicher, J. L.

1. Avicenna's Place in Arabic Philosophy. - "Ibn Sina" [3], 1952, 29-48.

Tekeli, Sevim

1. Takiyüddin'in Sidret ül-müntehâ'sinda aletler bahsi. - TTKB. 25, 1961, 213-238.
2. Equatorial Armilla of Izz al-Din b. Muhammad al-Wafa'i and Torquetum. - AÜDFD. 18, 1962, 227-259.
3. Bîrûnî'de güneş parametrelerinin hesabı. Bîrûnî's Method on Finding the Solar Parameters. - TTKB. 27, 1963, 25-36.
4. The Work on Taqi Al Din's Astronomical Instruments. - Araştırma. 1, 1963, 1-20.
5. Taqi Al Din's Method in Finding Solar Equations. - ACIHS XI. Sommaires. Varsovie - Cracovie, 1965, 107; Necati Lugal Armağanı. 24, 1968,.707-710.
6. Taqi al-Din's Work on Extracting the Chord 2^{0} and sin 1^{0} - Araştırma. 3, 1965, 123-131.
7. The Works on Duplication of the Cube in the Islamic World. - Araştırma. 4, 1966, 87-105.
8. The Clock in the Ottoman Empire in the 16^{th} Century and Taqi al Din's "The Brightest Stars for the Construction of the Mechanical Clocks". Ankara, 1966.
9. "The Duplication of the Cube" - Zail-i tatrir al Uqlidas, Majmua' and Sidra al Muntaha. - ACIHS XII (Paris, 1968), 3a, 1971, 137-140.
10. Habash al-Hasib. - DSB. 5, 1972, 612-620.
11. Al-Khujandi. - DSB. 7, 1973, 353-354.
12. Muhyi'l-din al-Maghribi. - DSB. 9, 1974, 555-557.
13. Piri Rais, Muhyi al-Din. DSB. 10, 1974, 616-619.
14. Kristof Kolomb'un haritasına dayanarak en eski Amerika haritasını çizen Türk amirali Pîrî Reîs. The Map of America by Pîrî Reîs. - Erdem, 1, 1985, No 3, 653-664, 673-683.
15. Evolution of the Astronomical Instruments in the Islamic World. - ACIHS XVIII, 1989, P2, 2.
16. Al-Khujandi. - ENWC. 1997, 481-482.
17. Piri Reis. - ENWC. 1997, 824-825.
18. Taqi al-Din. - ENWC. 1997, 934-935.

Temkin, Owsei (b. 1902)

1. A Medieval Translation of Rhazes' Clinical Observations. - Bull. of the History of Medicine. 12, 1942, 102-117.

Terés, E.

1. Abbas ibn Firnas. - al-Andalus. 25, 1960, 239-249.
2. Sobre el "vuelo" de Abbas ibn Firnas. - al-Andalus, 29. 1964, 365-369.

Ternovskiy, Vasiliy Nikolayevich (1888-1976)

1. Avitsenna, yego zhizn', trudy v oblasti biologii i meditsiny. - Trudy Kazan. med. instituta. 2, 1937, 1-16.
2. Polnoye izdaniye "Kanona vrachebnoy nauki" Ibn-Siny. - Sovetskoye zdravookhra-neniye. 1961, No 4, 69-73.
3. Ibn Sina (Avitsenna), 980-1037. M., 1969.

Terzioğlu, Arslan

1. Rukopisi iz oblasti tekhniki i aérodinamiki, a takzhe pervyye popytki polyota v IX-XVII vekakh v stranakh tyurko-musul'manskoy kul'tury. - Iz istorii aviatsii i kosmonavtiki. 17-18. ACIHS XIII (M., 1971), Materialy. M., 1972, 179-185.
2. Handschriften aus dem Gebiet der Technik und Aerodynamik sowie der ersten Flugversuche im IX-XVII Jhd. im islamisch-türkischen Kulturbereich. - ACIHS XIII (M., 1971). 12, 1974, 246-256.

Teshabayev, M.

1. Kartograficcheskiye i geodezicheskiye raboty al'-Khorezmi i Biruni. - Izv. Uzb. filiala Geograf. obshchestva SSSR. 3, 1957, 181-186.

Teufel, F.

1. Bâbur und Abû'l-Fazl. - ZDMG. 37, 1883, 141-187.

"Textos y Estudios"

1. Textos y Estudios sobra Astronomia Española en el siglo de Alfonso X. Ed. J.Vernet. Barcelona, 1981.

Thaer, Clemens

1. Die Euklid: Überlieferung durch aṭ-Ṭûsî. - QS (B). 3, 1936, 116-121.
2. Euklids Data in arabischer Fassung. - Hermes. 77, 1942, 197-205.

al-Thaqafi (No 290)

1. Kitab al-anwa' wa'l-azmina wa ma'rifa a'yan al-kawakib. Weather Predicting Stars, their Periods and Properties. Introduction in Arabic and English by Fuat Sezgin. F.M, 1985.

Thomson, Ron B.

1. Jordanus de Nemore and the Mathematics of Astrolabes: De plana spera. Toronto, 1978.

Thomson, W., Junge, G., and Raeder, J.

1. Codex Leidensis 399. 1. Euclidis Elementa ex interpretatione al-Hadschaschadschii cum commentariis al-Nairizii. 4, Hafniae, 1932.

Thorndike, Lynn (1882-1965)

1. History of Magic and Experimental sciences. 1-2. N.Y., 1923-1934.
2. Albumasar in Sadan. - Isis. 45, 1954, 22-32.
3. The Latin Translation of Astrological Works by Messahalla. - Osiris. 12, 1965, 49-72.

Tibawi, A. L.

1. Jama'at Ikhwan as-Safa. - J. of Amer. Univ. of Beyrut. 1930-1931, 1-80.
2. Ikhwan as-Safa and their Rasa'il. - The Islamic Quaterly. 2, 1955, 28-46.

Tibbetts, Gerald R.

1. The Star-Nomenclature of the Arab Navigators. - Der Islam. 40, 1965, 185-197.
2. The Navigators and Their Works. Navigational Theory. The Topography of the Navigational Texts. - Ibn Majid [1], 1971, 1-63, 269-614.

3. The Navigational Theory of the Arabs in the 15th and 16th Centuries. - Revista di Univ. Coimbra. 24, 1971, 323-343.
4. Comparisons between Arab and Chinese Navigational Techniques. - BSOAS. 36, 1973, 97-108.
5. The Balkhi School of Arab Geographers. - ENWC. 1997, 149.

Tibbon, Don Profeit

1. Tractat de l'Assafea d'Azarquiel. Ed. de los textos hebreo y latino y traduccion catalana de J.Millas i Vallicrosa. Barcelona, 1933.

Tichenor, Mark J.

1. Late Medieval Two-argument Tables for Planetary Longitudes. - JNES. 26, 1967, No 2, 126-128.

al-Tifashi (No 585)

1. Ahmed Teifascite. Fior di pensieri sulle pietre preziosi, stampata colla traduzione e diverse note di A.Raineri. Firenze, 1818.
2. Ahmed Teifascite. Fior di pensieri sulle pietre preziosi. Trad. di A.Raineri Biscia. Bologna, 1906.

al-Tiflisi (No 567)

1. Malhamat al-Daniyal. Tehran, 1343 h. [1925].
2. Bayan al-sina`at. Ba kushish-i Iraj Afshar. - Farhang-i Iranzamin. 5, Tehran, 1336 s.h. [1957], 279-457.
3. Wujuh-i Qur'an. Ba ihtimam-i Mahdi Muhaqqiq. Tehran, 1340 s.h. [1961].
4. Kamil al-ta`bir, tashih-i Muhammad Husayn Rukn-zada Adamiyat. Tehran, 1347 s.h. [1969].
5. Qanun-i adab. Ba ihtimam-i Ghulam Rida Tahir. 1-3. Tehran, 1350-1351 s.h. [1971-1972].
6. Opisaniye remyosel ("Bayan al-sana`at"). Per., vvedeniye i komm. G.P.Mikhalevich. M., 1976.

Tihon, Anne (b. 1944)

1. Tables islamiques à Byzance. - ACIHS XVIII, 1989, P2, 9.
2. Sur l'identité de l'astronome Alim. - AIHS. 1989, No 122, 3-21.

Ţihrani, Shaykh Agha Buzurg (Muhammad Muhsin)

1. al-Dhari`a ila tasanif al-shi`a. 1-3. Najaf, 1355-1357 h. [1936-1938], 4-15, Tehran, 1360 h.-1343 s.h. [1941-1965].

Tikkimal, N. S.

1. Sawai Jai Singh and the Marwar Affairs in the Reign of Emperor Muhammad Shah (1723-1724 A.D.). - Proceedings of the Indian History Congress. 31, 1969, 204-207.

Tilimsani (No 637)

1. La Tlemsaniya, poème sur le droit successoral musulman. Trad. G.Faure-Biguet. Valence, 1905.
2. Al-Ansari al-Tilimsani. Urjuza. Fas, undated.

al-Tirmidhi (No 148)

1. Sal-nama. Bukhara, 1323 h. [1905].

Tirmizi, S. Masoom Ali

1. Ibn Sina as a Scientist. - SHM. 5, 1981, No 3, 233-238.

Tisini, Tayeb

1. Die Materieauffassung in der islamisch-arabischen Philosophie des Mittelalters. B., 1972.

Tllashev, Hamid Hasan ughli

1. Ob arifmeticheskom traktate Nasir al-Dina al-Tusi. - "Iz istorii" [2], 1971, 210-220.
2. Solnechnyy traktat ob arifmetike al-Naysaburi. - "Iz istorii" [2], 1971, 220-242.
3. O nekotorykh matematicheskikh i astronomicheskikh rukopisyah Nasir al-Dina at-Tusi iz sobraniya Instituta vostokovedeniya AN Uz. SSR. - IAN Uz. SSR, ser. fiz.-mat. nauk. 1972, No 4, 63-65.
4. Novyye dannyye ob istorii matematiki v Sredney Azii XIII-XV vv. (po rukopisnym materialam Instituta Vostokovedeniya AN Uz. SSR). ADK (fm). Tash., 1973.
5. Traktat Imad al-Dina al-Bagdadi "Blestyashchiye pol'zy arifmeticheskikh pravil". - "Matematika Vostoka" [2], 1978, 179-190.
6. Nasir ad-Din at-Tusi i yego algebraicheskiy traktat. - "Ibn Sina" [14], 1981, 126-135.
7. O nekotorykh rukopisyakh iz sobraniya Instituta Vostokovedeniya AN Uz. SSR. - "Ibn Sina" [14], 136-138.

8. Obshchepedagogicheskiye idei uchonykh-entsiklopedistov Blizhnego i Srednego Vos-toka epokhi srednevekov'ya. Tash., 1985.
9. Obshchepedagogicheskiye i didakticheskiye idei uchonykh-entsiklopedistov Blizhnego i Srednego Vostoka epokhi srednevekov'ya. - ADD(p). M., 1986; Tash., 1989.

Tllashev, H. and Ramazanova, S. A.

1. Traktaty Abu Nasra ibn Iraka ob astrolyabiyakh. - "Matematika Vostoka" [1], 1977, 89-97.

Tllashev, H. and Umarov, A. T.

1. Desyatichnyye drobi v "Knige nachal ob indiyskoy arifmetike" al-Uklidisi (X vek). - "Matematika Vostoka" [2], 1978, 191-193.

Tleuberdiyev, Suleyman Kukenbay uly

1. Rasshireniye ponyatiya chisla v entsiklopedii "Brat'yev chistoty". - Sbornik mate-rialov algebraicheskogo seminara kafedry algebry i teorii chisel Kazakh. gos. ped. instituta. 1. Alma-Ata, 1972, 72-79.
2. Matematicheskiy atomizm i primeneniye dvizheniya v geometrii v entsiklopedii "Brat'yev chistoty". - Materialy nauchnoy konf. molodykh uchonykh g. Alma-Ata. Alma-Ata, 1972, 52--53.
3. Izlozheniye ucheniya ob otnosheniyakh v entsiklopedii "Brat'yev chistoty". - Sbornik materialov algebraicheskogo seminara kafedry algebry i teorii chisel Kazakh. gos. ped. insti-tuta. 4, 1973, 29-32.
4. Geometriya "Brat'yev chistoty". - TNKA XVII(m), 1975, 139-146.
5. O matematicheskom atomizme mutazilitov, ar-Razi i al-Biruni. - TNKA XIX(m), 1978, 133-142.
6. Matematicheskiy atomizm v drevnosti i na srednevekovom Vostoke. - Tezisy dokladov vsesouz. nauchnoy konf. po istorii fiz.-mat. nauk. Tbilisi, 1978, 57-58.
7. Matematicheskiy atomizm na srednevekovom Vostoke. - VIYT, 1984, No 1, 88-90.

Toll, Christopher

1. al-Hamdani. - DSB. 6, 1972, 79-80.
2. al-Hamdani. - ENWC. 1997, 393.

Tolstov, Sergey Pavlovich (1907-1976)

1. Biruni i yego vremya. - Vestnik AN SSSR. 1948, No 4, 42-57; 'al-Biruni" [1], 1950. 3-29; "al-Biruni" [2], 1950, 3-25.
2. Biruni va uning zamoni. - "al-Biruni" [3], 1950, 3-24.
3. Biruni i yego "Pamyatniki minuvshikh pokoleniy". - al-Biruni [15], 1957, VII-XX.
4. Biruni i problema drevney srednevekovoy istorii Khorezma. - Materialy Vsesoyuz. nauchnoy konf. vostokovedov v Tashkente. Tash., 1958, 125-130.

Toomer, Gerald James (b. 1934)

1. Notes on al-Biruni on Transits. - Orientalia. 34, No 1, 1965, 45-72.
2. The Solar Theory of az-Zarqal. A History of Errors. - Centaurus. 14, 1969, 306-336; "From Deferent to Equant" [1], 1987, 513-519.
3. A Survey of the Toledan Tables. - Osiris. 15, 1968, 5-174.
4. Al-Khwarizmi. - DSB. 7, 1973, 358-365.
5. Ptolemaic Astronomy in Islam. - JHA. 8, 1977, No 3, 204-210.

Tornberg, C. Johann (1807-1877)

1. Codices arabici, persici et turcici Bibliothecae Regiae Universitatis Upsaliensis. Lundae, 1849.
2. Codices orientales Bibliothecae Regiae Universitatis Lundensis. Lundae, 1850.

Torres, Esteban

1. Averroes y la ciencia médica. La Doctrina Anatomofuncional del Colliget. Madrid, 1974.

Torroja, José Maria

1. Los sistemas astronomicos. - "Historia" [2], 1981, 81-96.

Toynbee, Paget

1. Dante's obligations to Alfragnus in the Vita nuova and Convivio. Romania, 1896, 413-432.

Traco, S. and Gazic L.

1. Rukopisna zbirka Orijentalnog Instituta u Sarajevu. - Prilozi za orijentalni filologiju, 25, 1975, 27-43.

"Transfer of Science"

1. Transfer of Modern Science and Technology to the Muslim World. Ed. E.Ihsanogulu. Istanbul, 1992.

Tritton, A. S.

1. Al-Djurdjani. - EI². 2, 1963, 602-603.

Troilo, E.

1. Lineamento e interpretazione del sistema filosofica di Avicanna. Roma, 1956.

Tropfke, Johannes (1866-1938)

1. Geschichte der elementaren Mathematik. 1-7. B.-Lpz., 1921-1934; 1-4, B., 1930-1940.
2. Zur Geschichte der quadratischen Gleichungen über dreiundhalb Jahrtausend. - Jahresbericht der Deut. Math.- Vereinigung. 44, 1934, 43-47, 102-104.
3. Geschichte der Elementar-Mathematik. 4. Aufl. 1. München, 1980.

Troupeaau, G.

1. Sur un astrologue mentionné dans le "Fihrist". - Arabica. 16, No 1, 1969, 90.

Trouessar, J.

1. Recherches sur quelques phénomènes de la vision, précédées d'un essai historique et critique des théories de la vision depuis d'origine de la science jusqu'à nos jours. Brest, 1854.

Tsybul'skiy [Tsibulsky], Vladimir Vasil'yevich

1. Sovremennyye kalendari stran Blizhnego i Srednego Vostoka. Sinkhronisticheskiye tablitsy i poyasneniya. M., 1964.
2. Calendars of Middle East Countries. M., 1979.

Ṭuqan, Qadri Hafiz

1. Turath al-`arab al-`ilmi fi'l-riyadiyyat wa'l-falak. al-Qahira, 1360 h. [1941], 1367 h. [1948], 1382 h. [1963].
2. al-Khalidun al`arab. Beirut, 1373 h. [1954].
3. al-`Ulum `inda al-`arab. al-Qahira, 1380 h. [1960].
4. al-`Ulum `inda al-`arab wa'l-muslimin. `Amman, 1387 h. [1967].

al-Tuqati (Molla Lutfi) (No 869)

1. Molla Lutfi b. Maqtul, La duplication d'autel, Platon et le problème de Delos. Texte arabe, publ. par Şerefettin Yaltkaya. Trad. française et introduction par Abdulhakk Adnan et H.Corbin. P., 1940.

Turan, Şerefettin

1. Seydi Ali Reis. - IA. 10, 1966, 528-531.

"al-Turath al-falsafi"

1. al-Turath al-falsafi al-islami fi abkhath sufyatiyya. Beirut, 1987.

al-Ṭurayhi, Muhammad Kazim

1. Ibn Sina. al-Najaf al-ashraf, 1369 h. [1950]
2. al-Kindi al-faylasuf al-`arab al-awwal. Baghdad, 1382 h. [1962].

Türker Küyel, Mübahat

1. Yahyâ ibn Adî ve neşredilmemiş bir Risalesi. - AÜDFD. 14, No 1-2, 1956, 87-102.
2. Ibn Sinâ "On sorununun karşılıkları" Beyrûnî için mi yazmıştır? Les réponses à dix questions d'Avicenne sont-elles écrites pour al-Biruni? - " al-Biruni" [11], 1974, 83-93.
3. Beyrûnî'nin İbn Sinâ'ya sormuş olduğu on soru ve almış olduğu karşılıklar. Les dix questions posées par Abû Rayhân al-Bîrûnî à Ibn Sinâ et les réponses qu'il a reçues de lui. - "al-Biruni" [11], 1974, 113-125; "al-Biruni" [12], II, 1976, 395-405.

Turki, Muhammad Qadir and Guna, Sarur

1. Nama`lum Biruni. Kabul, 1314-1315 s.h. [1935-1936].

al-Tusi (No 518)

1. `Ajaib al-makhluqat wa `ajaib al-mawjudat. Ba ihtimam-i Manuchahr Satuda. Tehran, 1345 s.h. [1966].

al-Tusi (No 541)

1. Oeuvres mathématiques. Algèbre et Géométrie au XII[e] Siècle. Mu`allafat Sharaf al-Din al-Tusi al-riyadiyya. al-Jabr wa'l-handasa fi'l-qarn al-thani `ashar. 1-2. Éd. et trad. par R.Rashed. Tahqiq wa tarjama Rushdi Rashid. P., 1986.

al-Tusi (No 606)

1. Kitab Tahrir Usul li-Uqlidis min ta'lif khwaja Nasir al-Din al-Tusi. Euclidis Ele-mentorum libri tredecim ex traditione doctissimi Nasiridini Tusini. Romae, 1594.
2. Tahrir Usul Uqlidis. Istanbul, 1216 h. [1801]; Kalkata, 1239 h. [1824]; Fas, 1293 h. [1876].
3. Specimen editionis libri Nasireddini Tusensis Akhlaq-i-Nasiri. Ed. C.Schier. Dresden, 1841.
4. Akhlaq-i Nasiri. Lahur, 1265 h. [1849]; Bombay, 1267 h. [1851], 1320 h. [1902].
5. Risala-yi Bist bab dar ma`rifat-i asturlab. Tehran, 1276 h. [1859].
6. Sharh al-Isharat wa'l-tanbihat. Istanbul, 1290 h. [1873].
7. Tahrir Uqlidis fi `ilm al-handasa. Tehran, 1298 h. [1881].
8. Hall mushkilat al-Isharat. Lakhnaw, 1293 h. [1876].
9. Qawa`id al-`aqaid. Tehran, 1305 h. [1887].
10. Nassiruddin-el-Toussy, Traité du quadrilatère. Ed. et trad. par Alexandre Pacha Carathéodory. Constantinople, 1891.
11. Si fasl. Tehran, 1316 h. [1898].
12. Mi`yar al-ash`ar. Ba ihtimam-i `Abd al-Ghaffar Najm al-Dawla. Tehran, 1320 h. [1902].
13. Awsaf al-ashraf. Tehran, 1320 h. [1902].
14. Majmu` al-rasail. Hydarabad, 1358 h. [1939].
15. al-Juz' al-thani min al-rasail. Hydarabad, 1359 h. [1940].
16. Asas al-iqtibas. Ba ihtimam-i M. Ridawi. Tehran, 1325 s.h. [1946].
17. Nasiru'd Din Tusi. The Rawdatu'l-Taslim Commonly Called Tasawwurat. Persian text, ed. and transl. by W.Ivanow. Leiden, 1950.
18. Nasireddin Tusi. Traktat o polnom chetyrehstoronnike. Per. G.D.Mamedbeyli, S.P.Riznichenko and B.A.Rozenfel'da. Baku, 1952.
19. al-Risala al-Mu`iniya fi `ilm al-hay'a. Ba ihtimam-i M.T.Danish-Pazhuh. Tehran, 1335 s.h. [1956].
20. Hall-i mushkilat-i Mu`iniyya. Ba ihtimam-i M.T.Danish-Pazhuh. Tehran, 1335 s.h. [1956].
21. Fusul. Ba kushish M.T.Danish-Pazhuh. Tehran, 1335 s.h. [1956].
22. Risala-yi Bist bab dar ma`rifat-i asturlab. Ba ihtimam-i M.Ridawi. Tehran, 1335 s.h. [1956].
23. Majmu`a-yi rasail. Ba ihtimam-i M.Ridawi. Tehran, 1335 s.h. [1956].
24. Nasir ad-Din at-Tusi. Traktat, istselyayushchiy somneniya po povodu parallel'nykh liniy. Per. B.A.Rozenfel'da, prim. B.A.Rozenfel'da i A.P.Yushkevicha. - IMI. 13, 1960, 483-532.
25. Sbornik po arifmetike s pomoshch'yu doski i pyli. Per. S.A.Ahmedova i B.A.Ro-zenfel'da, prim. S.A.Ahmedova. - IMI. 15, 1963, 431-444.
26. Tahrir Kitab al-manazir li-Uqlidis. Nashara A.S.Damardash. - MMMA. 9, 1963, 243-290.
27. Nasir ad Din Tusi. The Nasirean Ethics. Transl. G.M.Wickens. L., 1964.
28. Jawami` al-hisab bi'l-takht wa'l-turab. Tahrir Ahmad Salim Sa`idan. - al-Abhath. 20. 1967, No 2, 91-164, No 3, 213-292.
29. Haja Nasiraddin Tusi. Ahlaqi Nasiri. Tarjüma, muqaddima wa sharhi R.Sulta-novundur. Baky, 1980.

al-Tusi (No 606) and Ulugh Beg (No 816)

1. Binae tabulae geographicae, una Nassir Eddini Persae, altera Ulug Beigi Tartari, Opera et Studio J.Gravii. Londini, 1648, 1652; Oxoniae, 1711.

"al-Tusi" (memorial collections)

1. Körkamli Azarbayjan alimi Mahamma Nasiraddinin anadan olmasyn 750 illiyina hasr edilmish sessiyada okhunajag ma'ruzalarin tezislari. Tezisy dokladov na sessii, posvya-shchonnoy 750-letiyu so dnya rozhdeniya vydayushchegosya azerbayjanskogo uchonogo Muhammeda Nasireddina. 16-22 noyabrya 1951 g. Baku, 1951.
2. Yadnama-yi khwaja Nasir al-Din al-Tusi. Tehran, 1336 s.h. [1957].

Tveritinova, Anna Stepanovna

1. Selections from the Holding in Oriental Studies in the Great Libraries of the Soviet Union. Articles and Notes. Honolulu, 1967.

Twersky, I.

1. A Maimonides Reader. N.Y., 1972.

Twetten, David P.

1. Averroes on the Prime Move Proved in the "Physics". - Viator. 26, 1995, 107-134.

Tytler, John

1. Essay on the Binomial Theorem as Known to the Arabs. - Asiatic Researches. Calcutta, 13, 1820, 456-466.
2. An Essay on the Extraction of the Roots of Integers as Practised by the Arabs. - Asiatic Researches. Calcutta, 17, 1832, 51-168.
3. Analysis and Specimens of a Persian Work on Mathematics and Astronomy. - JRAS. 4, 1837, 254-272.

Ueberweg, Friedrich (1826-1871)

1. Grundriss der Geschichte der Philosophie. Zweiter Teil. Die patristische und scholastische Zeit 11. Aufl. B., 1928.

Ülken, Hilmi Ziya

1. Türk feylesoflar antolojisi. Ankara, 1935.
2. Un philosophe de l'Islam Ebu-l-Berekat Bagdadi. - Proc. of 10th Internat. Congress of Philosophy, 1948, 270-273.
3. La pensée de l'Islam. Trad. par G.Dubois, M.Bilen et l'auteur. Istanbul, 1953.
4. İslam felsefesi tarihi. İstanbul, 1957.
5. Kâtip Çelebî ve fikir hayatımız. - "Hajji Khalifa" [1], 1957, 177-193.
6. Ibn Rüşd. - IA. 5, 1958, 781-798.
7. Ibn Sînâ. - IA. 5, 1958, 807-824.

Ullmann, Manfred

1. Die Medizin im Islam. Leiden, 1971.
2. Die Natur- und Geheimwissenschaft im Islam. - Handbuch der Orientalistik. Abt. 1.6, 1972.

Ulugh Beg (No 816)

1. Epochae celebriores astronomis, historii, chronologiis Chataiorum, Syrogreacorum, Arabum, Persorum, Chorasmiorum usitatae ex traditione Ulug Beigi, eas primus publicavit, recensuit et commentariis illustravit Johannes Gravius. Londini, 1650.
2. Jadwal-i mawadi`-i thawabit bar ṭul u ard bi-rasad yafta ast Ulugh Beg ibn Shahruh ibn Timur sive Tabulae long. ac lat. stellarum ex observations Ulugh Beighi Tamerlani Magni nepotis, Regionum ultra citraque Gjihan (i.e. Oxum) Principis potentissimi, ex tribus invicem collatis Mss Persicis jam primum Luce ac Latio donavit et commentaries illustravit Thomas Hyde. Oxonii, 1665.
3. Prolégomènes des Tables astronomiques d'Oloug-Beg. Publiés avec notes et variantes par L.A.Sédillot. P., 1847.
4. Prolégomènes des Tables astronomiques d'Oloug-Beg. Trad. et comm. par L.A.Sé-dillot. P., 1853.
5. Ulugh Beg's Catalogue of Stars. Revised from all Persian Manuscripts Existing in Great Britain with a Vocabulary of Persian and Arabic words, ed. E.B.Knobel. Washington, 1917.
6. Traktat o khorde sinusa odnogo gradusa (otryvok). Per. B.A.Rozenfel'da. - "Bash-makova" [1], 1975, 79-82.

Ulugh Beg, Brahe, Tycho, Halley, Edmund, and Hevelius

1. The Catalogue of Ptolemy, Ulugh Beg, Tycho Brahe, Halley, Hevelius deduced from the Best Authorities, with Various Notes and Corrections and Preface to Each Catalogue by F.Baily. L., 1843.

al-`Umari (No 717)

1. al-Ta`rif al-musṭalah al-sharif. al-Qahira, 1312 h. [1894-1895].
2. Masalik al-absar fi mamalik al-amsar. Nashara Ahmad Zaki Pasha. al-Qahira, 1343 h. [1923-1924].
3. Masalik al-absar fi mamalik al-amsar. Routes Toward Insight into the Capital Empires. With Introduction in Arabic and English by Fuat Sezgin. 1-27. F. M., 1988-1989.

Umarov, Giyas Yakubovich

1. Beruni, Kopernik i sovremennaya nauka. Tash., 1973.
2. Abu Rayhon Beruniy, Nikolay Kopernik wa hozirgi zamon fani. Toshkent, 1973.

Umarov, Sultan Umarovich (1905-1968) and Rosenfeld B. A.

1. O matematicheskikh glavakh "Knigi znaniya". - Ibn Sina [39], 1967, 3-17.

al Umawi (No 931)

1. Marasim al-intisab fi ma`alim al-hisab. Nashara A.S.Sa`idan. Halab, 1401 h. [1981].

Umnyakov, I. I.

1. Samaya staraya turetskaya karta mira. - Trudy Samarkand. gos. ped. instituta. 1, 1940.

Ünver, Ahmet Süheyl (1898-1986)

1. Ebu Reyhan Biruninin Farmakolojiye ait fikirleri. İstanbul, 1938.
2. Ebu Reyhan Biruni Kitabussaydale'sinde sıhhi fikirler hakkında. - Türk Tıp Tarihi. 17, 1940.
3. Avicenna Explains why Stars are Visible at Night and not during the Day. - JHM. 1946, No 4, 330-334.
4. Avicenna's Praise of Euclid. - JHM. 1947, No 2, 198-200.
5. Ali Kuşçu, hayatı ve eserleri. İstanbul, 1948.
6. Ebu Reyhan al-Beyrunî'nin farmakoloji ile ilgili görüşleri. Pharmacological Concepts of Ebu Reyhan el-Beyrûnî. - "al-Biruni" [11], 1974, 41-54.
7. Osmanlı Türkler'inde ilim tarihinde Muvakkithaneler. - Atatürk konferansları. 5, 1975, 217-257.

Upton, Joseph M.

1. A Manuscript of "The Book of the Fixed Stars" by `Abd ar-Rahman as-Sufi". - Metropolitan Museum Studies. 4, 1933, 179-197.

al-`Uqayli, Majdi

1. al-Kindi al-faylasuf al-Musiqar. Dimashq, 1964.

al-Uqlidisi (No 232)

1. Kitab al-fusul fi'l-hisab al-hindi. Nashara A.S.Sa`idan. Amman, 1393 h. [1973]; Halab, 1406 h. [1986].
2. The Arithmetic of Al-Uqlidisi. The Story of Hindu-Arabic Arithmetic as Told in Kitab al-Fusul fi al-Hisab all-Hindi. Transl. and annot. by A.S.Saidan. Dordrecht-Boston, 1977.

Uqtai

1. Fihrist-i kutub-i kutubkhana-yi mubarakayi Astan-i quds-i Ridawi. 1-3. Mashhad, 1345 h. [1926], 4-5. Mashhad, 1325-1329 /1366-1370 h. [1946-1950].
2. Fihrist-i kutubkhana-yi madrasa-yi Fadiliyya dar Mashhad. I. Mashhad, 1309 s.h. [1980].

Urazbekov, A.

1. Etika al'-Farabi. - "al-Farabi" [2], 1975, 158-163.

al-`Urdi (No 629)

1. Kitab al-Hay'a (Ta'rikh `ilm al-falak al-`arabi). Nashara J.Saliba. Silsila Ta'rikh al-`ulum `inda al-`arab. 2. Beirut, 1990.

Uri, J.

1. Bibliothecae Bodleianae codicum manuscriptorum orientalium pars prima. Oxoniae, 1787.

al-Urmawi (No 641)

1. Kitab al-adwar fi ma`rifa al-naghm wa'l-adwar. Ikhrajahu al-duktur Husayn `Ali Mahfuz. Baghdad, 1961.
2. Kitab al-adwar. al-Risala al-Sharafiyya fi'l-nisab al-ta`lifiyya. Book of the Cyclic Forms of Musical Modes. Treatise Dedicated to Sharaf al-Din on Proportions in Musical Composition. F.M., 1984.
3. Kitab al-adwar fi'l-musiqa. Nashara `Abd al-Malik Ghattas. al-Qahira, 1406 h. [1986].

al-Urmayuni (No 1017)

1. al-Nujum al-shariqat. Halab, 1347 h. [1928].

Urunbayev [Urinboyev], Asomiddin Urinboy ughli

1. K voprosu o vremeni vyyezda Ali Kushchi iz Sredney Azii. - ONU. 1971, No 9, 51-56.
2. Sharafuddin Ali Yazdiy va uning Zafarnoma asari kulyozmasi. Sharaf al-Din `Ali Yazdi i rukopis' yego truda Zafar-name. Sharaf ud-Din `Ali Yazdi and the Manuscript of His Work Zafar-nama. - Yazdi [6], 1972, 9-20, 23-34, 37-48.
3. Novyye dannyye o zhizni Ali Kushchi. - "Iz istorii" [2], 1972, 242-246.
4. Ali Qushchi - Ulughbek maktabining davomchisi. - ONU. 1994, No 7, 34-37.

Urunbayev, A. U. and Vahabova, B. A.

1. Rukopisi proizvedeniy Abu Ali ibn Siny v sobranii Instituta vostokovedeniya AN Uz. SSR. - ONU. 1980, No 8-9, 99-103.

Urvoy, Dominique

1. Ibn Rushd (Averroes). L. - N.Y. Transl. by O.Srewart. Routledge, 1991.

al-`Ushri, `Abd al-Salam

1. Abu'l-Hasan al-Mas`udi. al-Qahira, 1377 h. [1957]

Usmanov [Usmonov], Ahror Usmon ughli

1. O kommentarii Ansari k astronomicheskomy traktatu Ali Kushchi "Risala dar fala-kiyat" ("Risalai farsiya al-hay'at"). - TSGU. 203, 1972, 47-52.
2. Astronomicheskiy traktat "Mu`iniya" Nasiraddina Tusi. - "Matematika Vostoka" [2], 1978, 113-126.
3. Ibn Sina i yego zaslugi v istorii razvitiya matematicheskikh nauk. - "Ibn Sina" [14], 1981, 55-58.
4. Teoriya zatmeniy Nasiraddina Tusi v svete "Zija" al-Khorezmi. - "al-Khwarizmi" [4], 1985, 183-191.

Usmanov [Usmonov], Mirjalol.

1. Urta asr sharqining buyuk olim wa mutafakkiri Abu Bakr Zakariyo ar-Roziy. Tosh-kent, 1968.
2. Istochniki dlya izucheniya filosofskogo naslediya ar-Razi. - ONU. 1968, No 3, 19-23.
3. Filosofskiye vzglyady Abu Bakra Muhammada Zakariyya ar-Razi. - ADK (fs). Tash., 1969.
4. Zakariya ar-Razi. - "Iz filosofskogo naslediya" [1], 1972, 140-198.
5. Ar-Razi i Beruni. - ONU. 1972, No 9, 17-21.
6. Sotsial'no-eticheskiye vzglyady ar-Razi. - Nauch. trudy Tash. gos. universiteta. 453, 1973, 3-14.

Usmanov [Usmonov], Tashpulat

1. Beruniy elektr wa magnit hodisalari haqidagi fikrlari. - Sovet maktabi. 1972, No 7, 43-45.
2. Beruniyning fizika tarikhida tutgan urni. - "al-Biruni" [8], 1973, 179-197.

Utas, Bo

1. Notes on Some Public and Semi-public Libraries in the Near and Middle East Containing Persian and Other Moslem Manuscripts. - Acta Orientalia. 33, 1971, 169-192.

Utsekha, Larisa Georgiyevna

1. Geometricheskiye traktaty Nasra ibn Abdallaha. - TNKA XVI(m), 1973, 70-74.
2. Nachertatel'naya geometriya al-Biruni. - TNKA(m), 20-22, 1981, 145-151.
3. Traktat al-Biruni o tenyakh. - TNKA XIX(m), 1978, 152-159.
4. Traktat Ibn Sinana "Geometriya i zvyozdy". - Tezisy dokladov III vsesoyuznoy nauchnoy konf. po istorii fiz.-mat. nauk. Tbilisi, 1978, 60.

Uzunçarşılı, İsmail Hakkı

1. Osmanlı Devletinin İlmiye Teşkilatı, 2. baskı, TTK, Ankara, 1984.

Vadet, J. C.

1. al-Masawaih. - EI². 3, 1970, 892-893.

Vahabov, Sadyqjan Abdulla ughli

1. Ob astronomicheskom instrumente Ibn Siny. - TNKA XVII(m), 1974, 32-36.
2. Chetvyortyy traktat al-Biruni ob astrolyabiyakh. - TNKA XVIII(m), 1978, 3-8.
3. Novyy traktat Beruni ob astrolyabiyakh. - Sbornik nauchnykh trudov Tashkent-skogo gos. universiteta. 548, 1977, 17-21.
4. Dve matematicheskiye modeli al-Biruni. - IMI. 25, 1980, 328-334.
5. Matematicheskiye metody, primenyavshiesya v traktatakh Beruni ob astrolyabiyakh. ADK (fm). M., 1989.
6. Postroyeniye konicheskikh secheniy u al-Biruni. - TNKA XXVII-XXXI(m), 1990, 16-22.
7. Proyektivnyye preobrazovaniya v traktate al-Biruni ob astrolyabiyakh. - IMI. 32-33, 1990, 339-344.

Vahabov, S. A. and Tagi-zade, A. K.

1. Traktaty al-Biruni ob astrolyabiyakh. - TNKA XVII(m), 1974, 18-31.

Vahabova, Boriya Abdurahman qizi

1. Rukopisi proizvedeniy Ibn Siny v sobranii Instituta Vostokovedeniya AN Uz. SSR. Tash., 1982.
2. Makhtutat muallafat Abi `Ali ibn Sina fi majmu`a Ma`had al-ishtiraq Akadimiya al-`ulum fi Jumhuriya Uzbikistan al-Sufyatiyya al-Ishtiraqiyya. - AJ. 3, 1989, 103-111.

Vahabova, B.A. and Akmalova M.A.

1. Filologicheskiye sochineniya uchonykh Sredney Azii v sobranii Instituta Vostoko-vedeniya AN Uz. SSR. - "Materialy" [3], 1991, 322-338.

Vahabzadeh, Bijan

1. Two commentaries on Euclid's Definition of Proprtional Magnitudes. - ASP, 4, 1994, No 1, 181-197.
2. Al-Māhānī's commentary on the concept of ratio.- ASP, 12, 2002. No 1-6, 9-52.

Vajda, Georges

1. Répertoire des catalogues et inventaires de manuscrits arabes. P., 1949.
2. Index général des Manuscrits arabes musulmans de la Bibliothèque Nationale de Paris. P., 1953.
3. Ibn Maymun. - EI^2. 3, 1970, 876-878.

Vambéry, A.

1. The Travels and Adventures of the Turkish Admiral Sidi Ali Reis. L., 1899.

Van Brummelen, Glen

1. The Numerical Structure of al-Khalili's Auxiliary Tables. - Physis, 28. 1991, 667-697.
2. Mathematical Methods in the Tables of Planetary Motion in Kushyār Ibn Labbān's Jāmi' Zīj.-HM, 25, 1998, 265-280.
3. The Astronomical System in Mūsā ibn Nawbakht's Astrological Treatise, the Kitāb al-Kāmil.- Centaurus, 41, 1999, 213-243.

Van Brummelen, Glen and Berggren, J.L.

1. Abū Sahl al-Kūhī on the distance to the shooting stars.- JHA , 32, 2001, No 2, 137-151.

Van Dalen, Benno

1. Recovering Unknown Parameters in Islamic Astronomical Tables. - ACIHS XVIII, 1989, P2, 8.

1a. A Statistical Method for Recovering of Unknown Parameters from Medieval Astronomical Tables. - Centaurus, 32, 1989, No 2-3, 85-145.

2. Ancient and Mediaeval Astronomical Tables: Mathematical Structure and Parameter Values. Utrecht, 1993.
3. Al-Khwarizmi's Astronomical Tables Revisited: Analysis of the Equation of Time.- "From Baghdad to Barcelona" [1]. I, 1996, 195-252.

Van den Berg, L. W. Ch.

1. Verslag van eene verzameling Maleische, Arabische, Javaansche en andere handschriften, aan het Bataviaasch Genootschap van Kunsten en Wetenschappen ter bewa-ring afgestan. Batavia - den Haag, 1877.

Van den Bergh, Simon

1. De Tempels van het Licht voor Sochrawerdi. - Tijdschrift van Wijsbegeerte. 10, 1916, 30-59.
2. al-Suhrawardi. - EI. 4, 1934, 547-548.
3. Averroes' Tahafut. L., 1954.
4. Sühreverdî. IA. 11, 1970, 88-90.

Van der Waerden, Bartel Leendert (1903-1996)

1. Astronomie. - LM. 1, 1980, 1145-1149.
2. al-Asturlabi. - LM. 1, 1980, 1156.
3. A History of Algebra from al-Khwarizmi to Emmy Noether. B. - Hb. - N.Y. - To-kyo, 1985.
4. The Heliocentric System in Greek, Persian and Hindu Astronomy. - "From Deferent to Equant" [I], 1987, 525-545.

Van Ess, Josef

1. Movement and Theory of the "Jump" in al-Nazzam's Theology. - ISHAS 2, 1979, 47.
2. Abu'l-Qasem al-Ka`bi. - EIr. 1, 1985, 359-363.
3. al-Nazzam. EI^2. 7, 1993.

Van Ronkel, S.

1. Supplement to the Catalogue of the Arabic Manuscripts Preserved in the Museum of the Batavia Society of Arts and Sciences. Batavia. 1913.

Van Vloten, Gerolf (1866-1903)

1. Ein arabischer Naturphilosoph im 9. Jahrhundert el-Dschahiz, Übers. O.Rescher. Stuttgart, 1818.

Varda, Evhen

1. Vstupne slovo. - Abu'l-Faraj [21], 1972, 5-13.

Varisco, Daniel Martin

1. The anwa' Stars according to Abu Ishaq al-Zajjaj. - ZGAIW. 5, 1989, 145-166.
2. An Anonymous 14th Century Almanac from Rasulid Yemen. - ZGAIW. 9, 1994, 195-228.

Vecchia Vaglieri, Laura

1. `Ali b. Abi Talib. - EI^2. 1, 1962, 381-386.

Velidi [Valitov] Togan, Ahmed Zeki (1890-1970)

1. Der Islam und die geographische Wissenschaft. - Geographische Zeitung. 40, 1934, 361-372.
2. Ahmad Zaki Walidi Tughan. Siffa al-ma`mura `ala'l-Biruni. - Tadhakir diwan al-athar al-qadima bi'l-Hind. 53. Biruni's Picture of the world. - Memoirs of the Archaeological Survey of India. 53, 1941.
3. Kayseri ve Bursa'daki bazı yazmalar hakkında. Tarih Dergisi 1, 1949, No 1, 69-76; "Handschriften" [I], 2. 1986, 652-660.
4. al-Biruni ve hereket ül-arz. - İslâm Tetkikleri Enstitüsü Dergisi. i. 1953, 90-94.
5. Türkiye kütüphanelerindeki bazı yazmalar. - İslâm Tetkikleri Enstitüsü Dergisi. 2. 1956-1957, 59-88; "Handscriften" [I], 3, 1986, 661-690.
6. Majmu`a rasail riyadiyya dar kitabkhana-yi Maghnisa ki khud Khwaja Nasir al-Din jam` karda bud. - "al-Tusi" [2], 1957, 1-18.

Velidi Togan and Gökmen, F.

1. Bîrûnî. IA. 2, 1961, 635-647.

Velikhanova, Nailya

1. Vvedeniye v izucheniye istochnika. - Ibn Khordadbekh [3], 1986, 8-52.

Vera, Francisco

1. Historia de la mathematica en España. 3-4, Arabes y judios, Madrid, 1933.
2. La matematica de los musulmanes españoles. Buenos Aires, 1947.
3. La judios españoles y su contribucion a las ciencias exactan. Buenos Aires, 1948.
4. Les mathématiques à l'école de traducteurs de Tolède. - Annales de la Société polonaise de mathématiques. 21, 1948, 94-98.

Vernet Gines, Juan [Joan] (b. 1923)

1. Una version arabe resunida del almanach perpetuum de Zacuto. - Seferad. 10, 1950, 115-133.
2. Contribucion al estudio de la labor astronomica de Ibn al-Banna'. Tetuan, 1952.
3. al-Bitrudji. - EI^2. 1, 1954, 1250.
4. Las Tabulae probatae. Homenaje a Millas Villacrosa. 2. Barcelona, 1956, 501-522.
5. Los manuscritos astronomicos de Ibn al-Banna. - AGIHS VIII (Florence, 1956). 1958, 1, 297-298.
6. La ciencia en el Islam y Occidente. - Settimane di studio del Centro italiano di studi sull' alto Medioeve. 12, Spoleto, 1965, 537-576; "Historia" [1], 1979, 21-60.
7. Ibn al-Sa`ati. - EI^2. 3, 1968, 945.
8. Abu'l-Fida. DSB. 1, 1969, 28-29.
9. Ibn Abi Usaybi`a. - EI^2. 3, 1970, 693-694.
10. Ibn al-Banna. - DSB. 1, 1970, 437-438.
11. Les traductions scientifiques dans l'Espagne du X^{ème} siècle. - Cahiers de Tunisie. 18, 1970, 47-59.
12. Ibn Amadjur. - EI^2. 3, 1971, 702-703.
13. Ibn al-Haytham. - EI^2. 3, 1971, 788-789.
14. Traducion e innovation en la ciencia medieval. - Accad. dei Lincei. Fondazione Alessandro Volta. Atti dei convegni. 13. Roma, 1971, 741-757.

15. Fautes et contresens dans les traductions arabo-latines médievales: l'Introductorium in astronomiam d'Abou Ma`shar de Balkh. - ACIHS XII (Paris, 1968), Ib, Discours et conférences colloques. P., 1971, 97-104.
16. Al-Khuwarizmi. - DSB. 7, 1973, 357-358.
17. Al-Majriti. - DSB. 9, 1974, 39-40.
18. Mathematics, Astronomy, Optica. - The Legacy of Islam. Ox., 1974, 461-489.
19. Historia de la ciencia española. Madrid, 1975.
20. Yahya ibn Abi Mansur. - DSB. 14, 1976, 537-538.
21. al-Zarqali. - DSB. 14, 1976, 592-595.
22. Al-Biruni et les mouvements de la terre. - "al-Biruni" [12]. II, 1976, 219-234.
23. al-Karadji. - EI^2. 4, 1976, 600.
24. Al-Kashi. - EI^2. 4, 1976, 730-731.
24a. Ulugh Beg. - EI^2. 4, 1976, 762-763.
25. La cultura hispanoarabe entre Oriente y Occidente. Barcelona - Caracas - Mexico, 1978.
26. Un texto arabe de la corte Alfonso el Sabio - al-Andalus. 43, 1978, 401-421; [42], 301-317.
27. al-Khʷarazmi Muhammad b. Musa. - EI 2 . 4, 1978, 1070-1071.
28. al-Kuhi. - EI^2. 5, 1979, 354-355.
29. Tradicion y innovacion en la ciencia medieval. - "Historia" [1], 1979, 173-189.
30. Marmol, obra de Zarquiel. - Nommage à Georges Vajda. Louvain, 1980, 151-154.
31. La originalidad de la ciencia Arabe. - "Historia" [2], 1981, 3-22; [42], 109-127.
32. Algunos fenomenos observados bajo los Omeyas españoles. - Revista del Instituto Egipcio de estudios islamicos en Madrid, 21, 1981-82, 23-30; [42], 251-258.
33. Die Spanisch-Arabische Kultur im Orient und Okzident. Zürich - München, 1984.
34. Ce que la culture doit aux Arabes d'Espagne. P., 1985.
35. La ciencia en al-Andalus. Sevilla, 1986.
36. La astronomia en Maimonides e sa epoca. Madrid, 1986, 106-109.
37. La matematica arabe. - Historia de la matematica haste el siglo XVII. Madrid, 1986, 139-147.
38. al-Madjriti. EI^2. 5, 1986, 1109-1110.
39. Alfonso X y la tecnologia arabe. - "De astronomia Alfonsi Regis", Barcelona, 1987, 39-41.
40. Las traduciones del àrabea las lenguas romances setecientos años después de la muerte de Alfonso X el Sabio (1284). - "Diffusione delle scienze", 1987, 379-398.
41. La ciencia arab medieval i Catalunya. - Revista de Catalunya 9, 1987, 69-78.
42. De `Abd al-Rahman I a Isabel II. Barcelona, 1988.

Vernet, J., Casals, R., and Villuendas, M. V.

1. El capitolo primeiro del "Kitab asrar fi nata'iq al-afkar".- Awraq, 5-6, 1982-1983, 7-18; Vernet [42], 1988, 319-330.

Vernet, J. and Catalàµ , M. A.

1. Las obras mathematicas de Maslama de Madrid. - Al-Andalus. 30. 1965, No 1, 15-47; Vernet [41], 1988, 241-271.
2. Arquimedes arabe: el tratado de los circulos tangentes. - Al-Andalus. 33, 1968, No 1, 53-93.
3. Un ingeniero Arabe del siglo XI: al-Karayi. - al-Andalus. 35. 1970, No 1, 69-91.
4. Dos tratados del Arquimedes Arabe: Tratado de los circulos tangentes y el Libro de los triangulos. - Publicaciones del seminario de historia de la ciencia de la Real Academia de buenas letras. Barcelona, 1972, 33-86.

Vernet, J. and Orus, J. J.

1. Transformacion de coordenadas astronomicas entre los Arabes. - Gaceta mathematica. 2, 1950, 78-82.

Vernet, J. and Samso, J.

1. El Legado Cientifico Andalusi. Madrid, 1992.
2. The Development of Arabic Science in Andalucia. - EHAS. 1, 1996, 243-275.

"Verzeichnis"

1. Verzeichnis der Handschriften im Preussischen Staate. I. Hannover, 3. Göttingen. Berlin, 1894.

"Vestigia"

1. Vestigia Mathematica. Studies in Medieval and Early Modern Mathematics in Honour of H.L.L.Busard. Amsterdam - Atlanta, 1993.

Viladrich, Merce (b. 1959)

1. On the Sources of the Alpholsine Treatise Dealing with the Construction of the Plane Astrolabe. - JHAS. 6, 1982, 167-171.
2. El Kitab al-`amal bi'l-asturlab (Llibre de l'us de l'astrolabio) d'Ibn al-Samh. Barcelona, 1986.
3. Dos capitulos de un libro perdido de Ibn al-Samh. - al-Qantara. 7, 1986, 5-11.
4. Una nueva evidencia de materiales arabes en la astronomia alfonsi. - "De astronomia Alfonsi Regis", Barcelona, 1987, 105-116.
5. An astronomical Handbook from 9th Century Baghdad. - ACIHS XVIII. 1998, P2, 11.
6. The Planetary Latitude Tables in the Mumtahan Zij. - JHA. 18, 1988, No 4, 257-268.
7. The Mumtahan Tradition in al-Andalus. Analysis of Data from Calendar of Cordova Related to the Entrance of the Sun in the Zodiacal Signs. - "From Baghdad to Barcelona" [1]. I, 1996, 253- 265.

Viladrich, M. and Marti, R.

1. En torno a los tratados hispanicos sobre construccion de astrolabio hasta el siglo XIII. - "Textos y Estudios", 1981, 79-99.

Vilaseca, Forné, Salvador

1. Avicena. La Habana, 1982.

Vil'danova, Aida Beker qizi

1. Majma` al-arkam - pamyatnik bukharskogo deloproizvodstva VIII v. - ADK (fl.). Tash., 1963.
2. Matematika v sredneaziatskom traktare XVIII v. "Sobraniye tsifr". - "Iz istorii" [2],, 1972, 60-72.
3. Rukopisi trudov sredneaziatskikh matematikov i astronomov v fonde IV AN Uz. SSR. - "Materialy" [3], 1991, 302-321.
4. Rukopisi "Astronomicheskikh tablits Ulugbeka" i kommentariyev k nim v fonde IV AN RUz. - ONU. 1994, No 7, 66-67.

Villuendas, Maria Victoria

1. La trigonometria europea en el siglo XI. Estudio de la obra de Ibn Mu`ad El Kitab mayhulat. Barcelona, 1979.
2. Traktat Ibn Mu`aza po sfericheskoy trigonomertii. - IMI. 25, 1980, 317-319.
3. El origen de la Trigonometria. - "Historia" [2], 1981, 39-62.

Vladimirov, Vasiliy Sergeyevich (b. 1923)

1. Velikiy azerbayjanskiy uchonyy Muhammed Nasireddin Tusi. - IAN Az. SSR, ser. fiz.-mat. i tekhn. nauk. 1985, No 1, 3-9.

Vogel, Kurt (1888-1985)

1. Mohammed ibn Musa Alchwarizmi's Algorismus. Aalen, 1963.
2. Byzanz, ein Mittler - auch in der Mathematik - zwischen Ost und West. - ACIHS XIII (M. 1971). Colloquium: Wissenschaft im Mittelalter 1971; K. 1974, 62.
3. Ein unbestimmtes Problem al-Karağis in Rechenbüchern des Abendlandes - SA. 61, 1977, No 1, 57-74.
4. Wie wurden al-Hwarizmis mathematische Schriften in Deutschland bekannt? - SA. 1984, 68, No 2, 230-234.
5. Kak al-Khorezmi stal izvesten v Germanii. - "al-Khwarizmi" [4], 1985, 85-91.

Vollers Kurt (1857 - 1909)

1. Katalog der islamischen, christlich-orientalischen, jüdischen und samaritanischen Handschriften der Universitätsbibliothek zu Leipzig, Lpz, 1906.

Volodarskiy, Aleksandr Il'ich (b. 1938)

1. Indiyskaya matematika i Biruni. - IMEN. 20, 1978, 49-57.
2. The Interrelationship between Indian and Arabian Mathematics. - ISHAS 2, 1979, 80.
3. Al-Khorezmi i rasprostraneniye indiyskoy arifmetiki. - "al-Khorezmi" [1], 1983.
4. Al-Khorezmi i indiyskaya matematika. - ONU. 1983, No 7, 33-37, "al-Khorezmi" [4], 1985, 232-238.
5. Interrelation between Medieval Scientists of India and Central Asia in Mathematics and Astronomy. - "Scientific Exchanges" [1], 1985, 61-63.

Voorhoeve, Pieter

1. Handlist of Arabic Manuscripts in the Library of the University of Leiden and Other Ccollections in the Netherlands. Leiden, 1957.

Voronovskiy, Dmitriy Georgiyevich

1. Kanon meditsinskikh znaniy Ibn Siny. - "Ibn Sina" [5], 1953, 57-78.
2. Astronomy Sredney Azii ot Muhammeda al-Khawarazmi do Ulugbeka i yego shkoly (9-16 v.). - "Iz istorii" [1], 1965, 100-172.

"Vostokovednyye fondy"

1. Vostokovednyye fondy krupneyshikh bibliotek Sovetskogo Soyuza. Pod red. A.S.Tve-ritinovoy. M., 1963.

"Vvedeniye"

1. Vvedeniye [v ucheniye] o podobnykh i sootvetstvennykh figurakh. Per. i komm. A.B.Vil'danovoy. - Bulatov [4], 1978, 325-355.

Vyatkin, Vasiliy Lavrent'yevich (1869-1932)

1. Mirza Ulug bek i yego observatoriya v Samarkande. - "Mirza Ulug bek". Tash., 1925.

Vyshnegorskiy, A.

1. Predisloviye russkogo perevodchika. - Abu'l-Fida [5], 1890, 503-511.

Vyzgo, Tamara Semyonovna

1. O vklade Ibn Siny v mirovuyu muzykal'nuyu nauku. - "Ibn Sina [8], 1980, 189-201.
2. Muzykal'nyye instrumenty Sredney Azii. Istoricheskiye ocherki. M., 1980.

Vyzgo, T. S. and Rashidova, Dil'bar Abdusalam qizi

1. O muzykal'no-teoreticheskom nasledii narodov Sredney Azii. - ONU. 1962, No 3, 59-62.
2. Muzykal'no-teoreticheskoye naslediye velikikh sredneaziatskikh mysliteley. - Voprosy muzykal'noy kul'tury Uzbekistana. 2. Tash., 1969, 162-183.

Wagner, Ewald

1. Verzeichnis der orientalischen Handschriften in Deutschland. 17. Arabische Handschrifren. 1. Wiesbaden, 1976.

Walbridge, John

1. Al-Shirazi. - ENWC. 1997, 896-897.

Wallis, John (1616-1703)

1. De postulato quinto et definitione guinte lib. 6 Euclidis. Disceptatio geometrica. - Opera mathematica. 2. Oxoniae, 1693, 665-678.

Weinberg, Josef (d. ca 1942)

1. Die Algebra des Abu Kamil Šoğa' ben Aslam. München, 1935.

Weir, T. H.

1. The Arabic, Syriac and Hebraic Manuscripts in the Hunterian Library of the University of Glasgow. - JRAS, 1899, 739-756.
2. The Persian and Turkish Manuscripts in the Hunterian Library of the University of Glasgow. - JRAS, 1906, 595-609.

Weisweiler, M.

1. Verzeichnis der arabischen Handschriften der Universitätsbibliothek zu Tübingen. Lpz., 1930, "Handschriften [2], 3, 1987, 309-544..

Weisser, Ursula

1. Die Hyppokratische Lehre von den Siebenmonatskinder bei Galen und Tabit ibn Qurra. - SA. 63, 1979, 209-238.
2. Thabit ibn Qurra's Epitome on Galen's Work on Seven-Month Children. - JHAS. 7, 1983, 140-150.

Wenrich, Joannes Georgius

1. De auctorum graecorum versionibus et commentariis syriacis arabicis armeniacis persicisque commentatio. Lipsiae, 1842.

Wensink, Arent Jan (1882-1939)

1. Waṭwaṭ. - EI. 4, 1934, 1228-1229.
2. Abu Hanifa. - EI. 5, 1938, 6.
3. Al-Ash`ari. - EI. 5, 1938, 36.
4. La pensée de Ghazālī. P., 1940.
5. Masha'allah. - EI². 8, 1984, 390-391.

Wensinck, A. J., and Schoy, C.

1. Ḳibla. - EI. 2, 1927, 1059-1064.

Wertheim, Gustav

1. Programm der Realschule der israelitischen Gemeinde. F.M., 1893; Braunschweig, 1896.
2. Über die Lösung einiger Aufgaben in "Tractatus de numeris datis" des Jordanus Nemorarius. - BM (3). 1. 1908, 417-420.

Wieber, Reinhard

1. Nordwesteuropa nachder arabischen Bearbeitung der Ptolemäischen Geographie von Muhammed B. Musa al-Hwarizmi. Weltdorf - Hessen, 1974.
2. Eine Methode Birunis zur Bestimmung der Qibla durch Konstruktion aus dem Mas`udischen Qanun (V Maqala, Kap. 6). - ZDMG, 1977, Suppl. 3, 625-528.
3. Überlegungen zur Herstellung eines Seekartogramms anhand der Angaben in der arabischen Nautikertexten. Raynhart Fibir. Ta`milat fi i`ada insha kharita bahriyya istinadan ila ma`tiyat al-nusus al-`arabiyya fi'l-malaha. - JHAS, 4, 1980, No 1, 23-47, 118-126.

Wiedemann, Eilhard (1852-1928)

1. Beiträge zur Geschichte der Naturwissenschaften bei den Arabern. 1-9. - Ann. der Physik und Chemie. 159, 1876, 656-658; 1, 1877, 480; 4, 1878, 320; 7, 1879, 679-680; 14, 1881, 368; 17, 1882, 350-351, 1043-1044; [208], I, 1-12.
2. Zur Chemie der Araber. - ZDMG. 32, 1878, 575-580; [208], I, 13-18.
3. Zur Geschichte Abu'l Wefâs. - Zeitschr. für Math. und Physik. 24, Hist.-lit. Abt., 1879, 121-122; [208], I, 19-20.
4. Materiali per la storia delle scienze naturale presso gli Arabi. - BBSMF. 11, 1879.
5. Ottica degli Arabi. - BBSMF. 14, 1882.
6. Ueber "Die Darlegung der Abhandlung über das Licht" von Ibn al-Haiṯam. - Ann. der Physik. 20, 1883, 337-345; [208], I, 21-29.
7. Arabische specifische Gewichtsbestimmungen. - Ann. der Physik. 20, 1883, 539-541; [208], I, 30-32.
8. Ueber den Apparat zur Untersuchungen der Brechung des Lichtes von Ibn al-Haiṯam. - Ann. der Physik und Chemie. 21, 1884, 541-544; [208], I, 33-36.
9. Bemerkung zu dem Aufsatz von Hrn Dr. J.Baarmann: Abhandlung über das Licht von Ibn al-Haiṯam. - ZDMG. 38, 1884, 145-148; [208], I, 37-40.
10. Inhalt eines Gefässes in verschiedenen Abständen vom Erdmittelpunkte nach Al Khâzinî und Roger Baco. - Ann. der Physik. 39, 1890, 319; [208[, I, 41.
11. Zur Geschichte der Lehre von Sehen. - Ann. der Physik. 39, 1890, 470-474; [208], I, 42-46.
12. Ueber das Sehen durch eine Kugel bei den Arabern. - Ann. der Physik. 39, 1890, 565-576; [208], I, 47-58.
13. Zur Geschichte der Brennspiegel. - Ann. der Physik. 39, 1890, 110-130; [208], I, 59-79; SBPMS. 23, 1891, 5-21; [207] II, 739-755..
14. Über das Licht der Sterne nach Ibn Al Haithfam. - Wochenschr. für Astronomie, Meteorologie und Geographie. 33, 1890, 129-133; [208], I, 80-84.
15. Ueber die Naturwissenschaften bei den Arabern. - Sammlung gemeinverständlicher wiss. Vorträge (5). 97, 1890, 1-32; [208], I, 85-114.
16. Notiz über ein von Ibn al-Haitham gelöstes arithmetisches Problem. - SBPMS. 24, 1892, 83; [207] II, 756.
17. Zur Geschichte der Lehre von Sehen. - JPR. 7, 1893, 318-319; [208], I, 115-116.
18. I. Beiträge zur Geschichte der Chemie bei den Arabern. - SBPMS. 34, 1902, 45-58; [207], I, 1-14.
19. II. 1. Einleitung. Literatur. 2. Über elektrische Erscheinungen. 3. Über Magnetismus. 4. Optische Beobachtungen. 5. Über einige physikalische etc. Eigenschaften des Goldes. 6. Zur Geschichte der Chemie. - SBPMS. 36, 1904, 309-352; [207], I, 15-58. Re-edition of II. 3: "Mathematical Geography" [5], 1992, 246-255.
20. III. 1. Einleitung. 2. Besprechung eines Stückes aus der Beschreibung Ägyptens von el Kindî und die darin erwähnten Gelehrter. 3. Über den Brief des goldenen Hauses von Aristoteles. 4. Bemerkungen zur

Astronomie und Kosmographie der Araber. 5. Einige Biographien von griechischen Gelehrter nach Qiftî. 6. Über die Kenntnis von Uhren bei den Arabern. - SBPMS. 37, 1905, 218-263; [207], I, 59-104.
21. IV. Über Wagen bei den Arabern. - SBPMS, 37, 1905, 388-391; [207], I, 105-108.
22. V. Auszüge aus arabischen Enzyklopädien und anderes. - SBPMS. 37, 1905, 392-455; [207], I, 109-172; "Studies on al-Qazwini" [2], 1994, 158-163.
23. VI. Zur Mechanik und Technik bei den Arabern. - SBPMS. 38, 1906, 1-56; [207], I, 173-228.
24. VII. Über arabische Auszüge aus der Schrift des Archimades über die schwimmenden Körper. - SBPMS, 38, 1906, 152-162; [207], I, 229-239.
25. VIII. Über Bestimmung der specifischen Gewichte. - SBPMS. 38, 1906, 163-180; [207], I, 240-257.
26. IX. Zu der Astronomie bei den Arabern. Abhandlung über die Astronomie. Nachtrag. - SBPMS. 38, 1906, 181-194; [207], I, 258-271.
27. X. Zur Technik bei den Arabern. - SBPMS. 38, 1906, 307-357; [207], I, 272-322.
28. XI. Über al Fârâbîs Aufzählung der Wissenschaften (De Scientiis). - SBPMS. 39, 1907, 74-101; [207], I, 323-350.
29. XII. Über Lampen und Uhren. Nachträge. - SBPMS. 39, 1907, 200-225; [207], I, 351-376.
30. XIII. Über eine Schrift von Ibn al Haiṯam "Über die Beschaffenheit der Schatten". Aus al Kindîs Optik. - SBPMS. 39, 1907, 226-248; [207], I, 377-399.
31. XIV. 1. Über die Geometrie und Arithmetik nach den Mafâtîh al `Ulûm. 2. Über die Arithmetik nach Ibn al Afkânî. 3. Nachrichten über die Zahlzeichen. 4. Über das Schachspiel und dabei vorkommende Zahlenprobleme. 5. Nachträge- SBPMS. 40, 1908, 1-64; [207], I, 400-463.
32. XV. Über die Bestimmung der Zusammensetzung von Legierungen. - SBPMS. 40, 1908, 105-132; [207], I, 464-491.
33. XVI. Über die Lehre vom Schwimmen, die Hebelgesetze und die Konstruktion des Qarasṭûn. - SBPMS. 40, 1908, 133-159; [207], I, 492-518.
34. XVII. 1. Eine philosophische Studie von Ibn al Haiṯam über den Ort. 2. Ein von Ibn al Haiṯam gelöstes Zahlentheorem. 3. Über eine Berichtigung von Ibn al Haiṯam zu einem Satz der Banû Mûsâ. 4. Über das Messen (Misâha) nach Ibn al Haiṯam. - SBPMS. 41, 1909, 1-25; [207], I, 519-543.
35. XVIII. 1. Astronomische Instrumente. 2. Über trigonometrische Grössen. 3. Geo-dätische Messungen. - SBPMS. 41, 1909, 26-78; [207], I, 544-596; "Mathematical Geography" [7], 1992, 264-316.
36. XIX. Über die Brechung des Lichtes in Kugeln nach Ibn al Haiṯam und Kamâl al- Dîn al Fârisî. Nachtrag. - SBPMS. 42, 1910, 15-58; [207], I, 597-640.
37. XX. Einige Biographien nach al Baihaqî. SBPMS. 42, 1910, 59-77; [207], I, 641-659.
38. XXI. A. Über eine astronomische Schrift von al Kindî. B. Über Vermessung von Ibn Mammâtî. - SBPMS. 42, 1910, 294-302; [207], I, 660-668.
39. XXII. Stücke aus den Mafâtih al `Ulûm. - SBPMS. 42, 1910, 303-310; [207], I, 669-676.
40. XXIII. Einiges aus al Ǧaubarî. - SBPMS. 42, 1910, 311-322; [207]. I, 677-688.
41. XXIV. Zur Chemie bei den Arabern. - SBPMS. 43. 1911, 72-113; [207], I, 689-730.
42. XXV. Über Stahl und Eisen bei den muslimischen Völkern. - SBPMS. 43, 1911, 114-131; [207], I, 731-748.
43. XXVI. Über Charlatatane bei den Muslimen nach al Ǧaubarî.- SBPMS. 43, 1911, 206-232; [207], I, 749-775.
44. XXVII. 1. Geographisches von al Bêrûnî. 2. Auszüge aus al Schîrâzîs Werk über Astronimie. 3. Über die Grösse der Meere nach al Kindî. 4. Geographische Stellen aus den Mafâtih. - SBPMS. 44, 1912, 1-40; [207], I, 776-815; "Mathematical Geography" [7], 1992, 331-370.
45. XXVIII. a) Biographie von al Beihaqî nach Jâqût. b) Biographie von al Bêrûnî nach Ibn Abî Useibi`a. - SBPMS. 44, 1912, 113-118; [207], I, 816-821; "Studies on Yaqut" [1], 1992, 219-224.
46. XXX. Zur Mineralogie im Islam. 1. Übersetzung des Werkes von al Akfânî über Mineralogie. 2. Mineralogisches aus einer arabischen Handels- und Warenlehre. 3. Bemerkungen über Edelsteine, Mineralien, Mineralvorkommen. - SBPMS. 44, 1912, 205-256; [207], I, 829-880.
47. XXXI. Über die Verbreitung der Bestimmungen des specifischen Gewichtes nach Bîrûnî. - SBPMS. 45, 1913, 31-34; [207], II, 1-4.
48. XXXII. Aus der arabischen Handels- und Warenlehre von Abû'l Fadl Ǧa`far Ibn `Alî al Dimaschqî. - SBPMS. 45, 1913, 35-54; [207], II, 5-24.
49. XXXIII. Über optische Täuschungen nach Fahr al Dîn al Râzî und Nasîr al Dîn al-Ṭûsî. - SBPMS. 45. 1913, 154-167; [207], II, 25-38.
50. XXXIV. Über die Gewichte der Kubikelle usw. verschiedener Substanzen nach arabischen Schriftstellern. - SBPMS. 45, 1913, 168-173; [207], II, 39-44.
51. XXXV. Über Nivellieren. - SBPMS. 46, 1914, 15-16; [207], II, 45-46.
52. XXXVI. Über Musikautomaten. - SBPMS. 46, 1914, 17-26; [207], II, 47-56.
53. XXXVII. Über die Stundenwage. - SBPMS. 46, 1914, 27-38; [207], II, 57-68.
54. XXXVIII. Theorie des Regenbogens von Ibn al Haiṯam. - SBPMS. 46, 1914, 39-56; [207], II, 69-86.

55. XXXIX. Über die Camera obscura bei Ibn al Haiṯam. Abhandlung von al Hasan ibn al Hasan Ibn al Haiṯam über die die Gestalt der Finsternis (Kusûf). - SBPMS. 46, 1914, 155-169; [207], II, 87-101.
56. XL. Über Verfälschung von Drogen usw. nach Ibn Bassâm und Nabarâwî. - SBPMS. 46, 1914, 172-206; [207], II, 102-136.
57. XLI. Zur Geschichte des Zuckers. - SBPMS. 47, 1915, 83-92; [207], II, 137-146.
58. XLII. Zwei naturwissenschaftliche Stellen aus dem Werk von Ibn Hazm über die Liebe, über das Sehen und das Magneten. - SBPMS. 47, 1915, 93-100; [207], II, 147-154.
59. XLIII. Naturwissenschaftliches aus Ibn Qutaiba. - SBPMS. 47, 1915, 101-120; [207], II, 155-174.
60. XLIV. Kleine Mitteilungen. - SBPMS. 47, 1915, 121-126; [207], II, 175-180.
61. XLV. Zahnärztliches bei den Muslimen. - SBPMS. 47, 1915, 127-129; [207], II, 181-183.
62. XLVI. Darwinistisches bei Ǧâhiz. - SBPMS. 47, 1915, 130-131; [207], II, 184-185.
63. XLVII. Über die Astronomie nach den Mafâtîh al 'Ulûm. - SBPMS. 47, 1915, 214-242; [207], II, 186-214.
64. XLVIII. Über die Waage des Wechselns von al Châzinî und über die Lehre von den Proportionen nach al Bêrûnî. - SBPMS. 48-49, 1916-1917, 1-15; [207], II, 215-229.
65. L. Beschreibung von Schlangen bei Ibn Qaff. - SBPMS. 48-49, 1916-1917, 61-64; [207], II, 275-278.
66. LI. Über den Abschnitt über die Pflanzen bei Nuwairî. - SBPMS. 48-49, 1916-1917, 151-176; [207], II, 279-304.
67. LII. Über den Zucker bei den Muslimen. - SBPMS. 48-49, 1916-1917, 177-185; [207], II, 305-313.
68. LIII. Über die Kriechtiere nach al Qazwînî nebst einigen Bemerkungen über die zoologischen Kenntnisse der Araber. - SBPMS. 48-49, 1916-1917, 228-285; [207], II, 314-371; "Studies on al-Qazwini" [2], 1994, 196-253.
69. LIV. Übersetzung und Besprechung des Abschnittes über die Pflanzen von Qazwînî. - 48-49, 1916-1917, 286-321; [207], II, 372-407; "Studies on al-Qazwini" [2], 1994, 254-289.
70. LV. Nachträge zu Aufsatz über den Zucker. - SBPMS. 48-49, 1916-1917, 322-328; [207], II, 408-414.
71. LVI. Über Parfüms und Drogen bei den Arabern. - SBPMS. 48-49, 1916-1917, 329-344; [207], II, 415-430.
72. LVII. Definitionen verschiedener Wissenschaften und über diese verfasste Werke. 1. Im Fihrist von al Nadîm aufgeführte Werke. 2. Definitionen nach Ibn Sînâ. 3. Definitionen nach Akfânî. 4. Definitionen nach H.Chalfa. 5. Aus der Schrift über die Wissenschaften von al Tauhîdî. - SBPMS. 50-51, 1918-1919, 1-32; [207], II, 431-462.
73. LVIII. Bestimmung der Durchmesser der um und in regelmässige Vielecke beschriebenen Kreise und des Inhaltes von Flächen und Körper sowie Stücke einer Lehre al Ǧabr wa'l Muqâbala. - SBPMS. 50-51, 1918-1919, 264-271; [207], II, 463-470.
74. LIX. Gefäss zum Regeln des Wasserausflusses bei Wasseruhren. - SBPMS. 50-51, 1918-1919, 272-274; [207], II, 471-473.
75. LXIII. Zur Geschichte der Alchemie. - SBPMS. 52-53, 1920-1921, 126-128; [207], II, 545-547.
76. LXIV. Über Ṯâbit ben Qurra, sein Leben und Wirken. - SBPMS. 52-53, 1920-1921, 189-219; [207], II, 548-578.
77. LXV. Über die Eigenschaft des Yâqût (Hyazinthes). - SBPMS. 52-53, 1920-1921, 220; [207], II, 579.
78. LXVIII. Über eine besondere Art des Gesellschaftrechnens nach Ibn al Haiṯam. - SBPMS. 58-59, 1926-1927, 191-196; [207], II, 616-621.
79. LXXI. Über eine Schrift über die Bewegung des Rollens und die Beziehung zwischen dem Geraden und dem Gekrümmten von Quṭb al Dîn Mahmûd b. Mas'ûd al Schîrâzî. - SBPMS. 58-59, 1926-1927, 219-224; [207], II, 644-649.
80. LXXII. Einleitung zu dem astronomischen Teil des Kitâb al Schifâ' (Werk der Genesung) von Ibn Sînâ. - SBPMS. 58-59, 1926-1927, 225-227; [207], II, 650-652.
81. LXXIII. Zu der Redaktion von Euklids Elementen durch Nasîr al Dîn al Ṭûsî. - SBPMS. 58-59, 1926-1927, 228-236; [207], II, 653-661.
82. LXXIV. Über die Milchstrasse bei den Arabern. - SBPMS. 58-59, 1926-1927, 348-362; [207], II, 662-676.
83. LXXV. Zum Leben von Nasîr al-Dîn al-Ṭûsî. - SBPMS. 58-59, 1926-1927, 363-379; [207], II, 677-693.
84. LXXVI. Über arabische astronomische Instrumente. - SBPMS. 58-59, 1926-1927, 380; [207], II, 694.
85. LXXVIII. Nasîr al Dîn al Ṭûsî. Nach einem von Verfasser hinterlassenen Manuskript bearbeitet und herausgegeben von Julius Ruska. - SBPMS. 60, 1928, 289-316; [207], II, 701-728.
86. LXXIX. Ibn al Schâṭir, ein arabischer Astronom aus dem 14. Jahrhundert. - SBPMS. 60, 1928, 317-326; [207], II, 729-738; "Ibn al-Shatir" [1], 1976, 17-26.
87. Ibn al Haiṯam, ein arabischer Gelehrter. - Festschrift für J.Rosenthal. Lpz., 1906, 149-178; [208], I, 117-146.
88. Über das Experiment im Altertum und Mittelalter. - Unterrichtsblatt für Mathematik. 12, 1906, 73-75, 93-95, 121-129; [208], I, 147-168.
89. Zur Physik bei den Arabern. - JPR. 20, 1906, 77-81; [208], I, 169-173.
90. Über die Lage der Milchstrae nach Ibn al Haiṯam. - Sirius. 39, 1906, 113-115; [208], I, 174-176.
91. Zur Alchemie bei den Arabern. I. - J. für praktische Chemie. 76, 1907, 65-87, 105-123; [208], I, 177-218.

92. Über die Reflexion und Umbiegung des Lichtes von Nasîr al Dîn al Ṭûsî. - JPR. 21, 1907, 38-44; [208], I, 219-225.
93. Zur Geschichte des Kompasses bei den Arabern. - Verhandl. der Deutschen Phys. Gesellschaft. 9, 1907, 764-773, 11, 1909, 262-266, 19/20, 1919, 665-667; [208], I, 226-235, 282-286, II, 883-885; "Mathematical Geography" [5], 1992, 256-273.
94. Über das al-Bêrûnîsche Gefäss zur spezifischen Gewichtsbestimmung. - Verhandl. der Deutschen Phys. Gesellschaft. 10, 1908, 339-343; [208], I, 236-240.
95. Über die Konstruktion der Springbrunnen durch muslimische Gelehrte. - Festschrift der Wetterauischen Gesellschaft für die gesamte Naturkunde. Hanau, 1908, 29-43; [208], I, 241-255.
96. Über die Entstehung der Farben nach Nasîr al Dîn al-Ṭûsî. - JPR. 22, 1908, 86-91; [208], I, 256-261.
97. Über das Goldmachen und Verfälschung der Perlen nach al Ǧaubarî. - Beiträge zur Kenntnis des Orientes. 5, 1908, 77-96; [208], I, 262-281.
98. Anschauungen der Araber über die Bewegung der Erde. - Mitteil. zur Geschichte der Medizin und Naturwiss. 8, 1909, 1-3; [208], I, 287-289.
99. Zu den Biographien arabischer Mathematiker, Naturforscher und Aerzte. - SBPMS. 41, 1909, 208; [208], I, 290.
100. Über chemische Apparate bei den Arabern. - Beiträge aus der Geschichte der Chemie, dem Gedächtnis von G.W.A.Kahlbaum. Herausgeber P.Diergart. Lpz. - Wien, 1909, 234-252; [208], I, 291-309.
101. Zur Bestimmung des Erdumfanges von al-Bêrûnî. - AGNT. 1, 1909, 66-69; [208], I, 310-313; "Mathematical Geography" [7], 1992, 317-320.
102. Über Versuche bei den Muslimen. - AGNT. 1, 1909, 156; [208], I, 314.
103. Zur Kenntnis der Phosphoreszenz bei den Muslimen. - AGNT. 1, 1909, 156-157; [208], I, 314-315.
104. Zur Mineralogie bei den Muslimen. - 1, 1909, 208-211; [208], I, 317-320.
105. Ueber die Hebelgesetze bei den Muslimen. - AGNT. 1, 1909, 211-213; [208], I, 320-322.
106. Einige biographische Notizen aus arabischen Schriftstellern. - AGNT. 1, 1909, 216-217; [208], I, 323-324.
107. Ein Ausspruch über die Chemiker bei Qazwînî. - AGNT. 1, 1909, 292; [208], I, 325.
108. Anschauungen der Muslime über die Gestalt der Erde. - AGNT. 1, 1909, 310-319; [208], I, 326-335; "Mathematical Geography" [7], 1992, 321-330.
109. Naturschilderungen bei al Hamdânî. - Beiträge zur Kenntnis des Orientes. 7, 1909, 18-29; [208], I, 336-347; "Studies on al-Hamdani" [1], 1993, 425-436.
110. Ueber den Grund aus dem die Sterne bei Nacht sichtbar und bei Tage verborgen sind, von Hibbat Allâh Ibn Malkâ al-Jehûdî al-Baghdâdî. - JPR, 23, 1909, 49-54; [208], I, 348-353.
111. Ibn al Haiṯams Schrift über die sphärischen Hohlspiegel. - BM (3). 1909/10, No 4, 293-307; [208], I, 354-368.
112. Über den Sextant des al-Choǧendî. - AGNT. 2, 1910, 149-151; [208], I, 406-408.
113. Über Leuchtfeuer bei den Muslimen. - AGNT. 2, 1910, 151-154; [208], I, 408-411.
114. Über eine optische Vorrichtung. - AGNT. 2, 1910, 154; [208], I, 411.
115. Über Kenntnissen der Muslime auf dem Gebiete der Mechanik und Hydrostatik. - AGNT. 2, 1910, 394-398; [208], I, 412-416.
116. Ueber geometrische Instrumente bei den muslimischen Völkern. - Zeitschr. für Vermessungswesen. 22, 1910, 1-8, 585-592, 23, 1910, 617-625; [208], I, 417-433.
117. Über physikalische Aufgaben bei Elia Misrachi. - Monatschr. für Geschichte und Wissenschaft des Judentums (Breslau). 54, 1910, 224-232; [208], I, 434-442.
118. Über die Erfindung der Camera obscura. - Verhandl. der Deut. Phys. Gesellschaft. 1910, 177-182; [208], I, 443-448.
119. Über die Zeichen für die Planeten usw. auf Astrolabien. - Byzantinische Zeitschr. 19, 1910, 145-146; [208], I, 449-450.
120. I. Über die Konstruktion der Springbrunnen in Teichen die ihre Gestalt wechseln und über die immerwährenden Flöten. II. Über Musikautomaten bei den Arabern. - Centenario della nascita di M.Amari. 2, 1910, 104-185; [208], I, 451-472.
121. Über die erste Erwähnung der Dunkelkammer durch Ibn al-Haiṯam. - JPR. 24, 1910, 12-13; [208], I, 473-474.
122. Über die Herstellung von Glocken bei den Muslimen. - Mitteil. zur Geschichte der Medizin und Naturwiss. 9, 1910, 475-476; [208], I, 475-476.
123. Über das Färben der Tiere und Menschen nach al Ǧaubarî - Mitteil. zur Geschichte der Medizin und Naturwiss. 9, 1910, 476-480; [208], I, 476-480.
124. Eine Zeichnung des Auges bei dem Bearbeiter der Optik von Ibn al Haiṯam, Kamâl al Dîn al Fârisî, und Merkverse über den Bau des Auges. - Zentralblatt für Augen-heilkunde. 34, 1910, 204-208; [208], I, 481-485.
125. Ueber den Wert von Edelsteinen bei den Muslimen. - Der Islam. 2, 1911, 345-358; [208], I, 502-515.
126. Über das Leben von Ibn al-Haiṯam und al-Kindî. - JPR, 25, 1911, 6-11; [208], I, 516-521.

127. Die Schrift über den Qarastûn. - BM (3). 1911/12, No 1, 21-39; [208], I, 522-540.
128. Zu Ibn al Haitams Optik. - AGNT. 3, 1912, 1-53; [208], I, 541-593.
129. Zur Beurteilung von Astrologie und Alchemie bei den Muslimen. - AGNT. 3, 1912, 79-80; [208], I, 594-595.
130. Zu Optik von Kamâl al Dîn. - AGNT. 3, 1912, 161-177; [208], I, 596-612.
131. Zu den optischen Kenntnissen von Qutb al Dîn al Schîrâzî. - AGNT. 3, 1912, 187-193; [208], II, 613-619.
132. Über einen astrologischen Traktat von al Kindî. - AGNT. 3, 1912, 224-226; [208], II, 620-622.
133. Über die Dimension der Erde nach muslimischen Gelehrten. - AGNT. 3, 1912, 250-255; [208], II, 623-628; "Mathematical Geography" [7], 1992, 378-373.
134. Aus der Botanik des muslimischen Volkes. - AGNT. 3,, 1912, 299-306; [208], II, 629-636; "Studies on al-Qazwini" [2], 1994, 165-172.
135. Über die Gestalt, Lage und Bewegung der Erde sowie philosophisch-astronomische Betrachtungen von Qutb al Dîn al Schîrâzî. - AGNT. 3, 1912, 395-422; [208], II, 637-664.
136. Zu den Anschauungen der Araber über die Bewegung der Erde (Nachtrag). - Mitteil. der Geschichte der Medizin und Naturwiss. 11, 1912, 131; [208], II, 665.
137. Über den indisches Kreis. - Mitteil. zur Geschichte der Medizin und Naturwiss. 11, 1912, 252-255; [208], II, 666-669.
137a. Über die Morgen- und Abenddämmerungen. - Der Islam. 3, 1912, 193-194.
138. Über al Subh al kadib (Die falsche Dämmerung). - Der Islam. 3, 1912, 195; [208], II, 700.
139. Beschreibung des Auges nach al Qazwînî. - JPR. 26, 1912, 67-73; [208], II, 701-707; "Studies on al-Qazwini" [2], 1994, 173-179.
140. Zur Geschichte der Alchemie. - J. für praktische Chemie. 193, 1912, 391-392; [208], II, 708-709.
141. Optische Studien in Laienkreisen im 13. Jahrhundert in Aegypten. - JPR. 27, 1913, 65-72; [208], II, 710-717.
142. Ein Instrument, das die Bewegung von Sonne und Mond darstellt nach al Bîrûnî. - Der Islam. 4, 1913, 5-13; [208], II, 718-726.
143. Ibn Sînâ's Anschauung von Sehvorgang. - AGNT. 4, 1913, 239-241; [208], II, 727-729.
144. Über die Fata Morgana nach arabischen Quellen. - Meteorologische Zeitschr.. 30, 1913, 246-248; [208], II, 730-732.
145. Arabische Studien über den Regenbogen. - AGNT. 4, 1913, 453-460; [208], II, 745-752.
146. Aus Nuwairîs Enzyklopädie. Über Parfüms. - AGNT. 6, 1913, 418-426; [208], II, 753-761.
147. Ein arabisches Gefäss, das sich stetig mit Wasser füllt und dies dann plötzlich ausgiesst. - Zeitschr. für math. und naturwiss. Unterricht. 45, 1914, 240-241; [208], II, 762-763.
148. Ueber Charlatane unter den arabischen Zahnärzten und über die Wertschätzung des Zahnstochers bei den muslimischen Völkern. - Korrespondenzblatt für Zahnärzte. 43, 1914, 231-236; [208], II, 764-769.
149. Ueber die verschiedenen, bei der Mondfinsternis auftretenden Farben nach Bîrûnî. - JPR. 28, 1914, 25-30; [208], II, 792-797.
150. Kulturgeschichtliches und Klimatologisches aus arabischen Schriftstellern. - AGNT. 5, 1915, 56-68; [208], II, 798-810; "Studies on al-Qazwini" [2], 1994, 180-192.
151. Zur Zahnheilkunde bei muslimischen Völkern. - Korrespondenzblatt für Zahnarzte. 44, 1915, 58; [208], II, 811.
152. Ausschauungen von muslimischen Gelehrten über die blaue Farbe des Himmels. - Festschrift Elster und Geitel. Lpz., 1915, 118-126; [208], II, 812-820.
153. Über arabische Parfüms. - Archiv für Geschichte der Medizin. 8, 1915, 83-88; [208], II, 821-826.
154. Zur Lehre von der Generatio spontanea. - Naturwiss. Wochenschrift. 15, 1916, 279-281; [208], II, 827-829; "Studies on al-Qazwini" [2], 1994, 279-281.
155. Über Erfinder nach arabischen Angaben. - Geschichtsblätter für Technik, Indust-rie und Gewerbe. 3, 1916, 193-195; [208], II, 848-850.
156. Ueber Schiffe, deren Bretter nicht zusammengenagelt sind. - Geschichtsblätter für Technik, Industrie und Gewerbe. 3, 1916, 280-281; [208], II, 851-852.
157. Die Naturwissenschaft bei den orientalischen Völkern. - Erlanger Aufsätze aus ernster Zeit, 1917, 49-58; [208], II, 853-862.
158. Ueber Schiffsmühlen in der muslimischen Welt. - Geschichtsblätter für Technik, Industrie und Gewerbe. 4, 1917, 25-26; [208], II, 863-864.
159. Zum Wunder des heiligen Feuers. - Zeitschr. des Deutschen Palästina-Vereins. 40, 1917, 248-251. 41, 1918, 161; [208], II, 865-869.
159a. Über die Konstruktion der Gefässen und Gestalten die bei Trinkgelagen passende Verwendung finden. - Der Islam. 8, 1918, 55-93.
160. Zu den magischen Quadraten. - Der Islam. 8, 1918, 94-97; [208], II, 870-873.

161. Über Zahnpflege bei den muslimischen Völkern. - Deutsche Monatsschr. für Zahn-heilkunde. 36, 1918, 362-366; [208], II, 874-878.
162. Zur Kenntnis der Naturwissenschaften in der muslimische Welt. - Geschichts-blätter für Technik, Industrie und Gewerbe. 5, 1918, 109-112; [208], II, 879-882.
163. Einleitungen zu arabischen astronomischen Werken. - Das Weltall. 20, 1919, No 3/4, 21-26, 1920, No 15/16, 131-134; [208], II, 886-897.
164. Ueber die angebliche Verwendung des Pendels zur Zeitmessung bei den Arabern. - Verhandl. der Deutschen phys. Gesellschaft. 21, 1919, 663-664; [208], II, 912-913.
165. Über die Konstruktion der Ellipse. - Zeitschr. für math. und naturwiss. Unterricht. 50, 1919, 177-181; [208], II, 914-918.
166. Über die Naturwissenschaft im islamischen Mittelalter. - Der neue Orient. 5, 1919, 52-56; [208], II, 919-923.
167. Eine Sonnenfinsternis, ein Erdbeben, ein Meteor und ein Meteorstein nach arabischen Quellen. - Das Weltall. 20, 1920, No 17/18, 154-155; [208], II, 924-925.
168. Ueber die angebliche Beobachtung eines Planetendurchganges durch Averroes und andere. - Das Weltall. 20, 1920, No 21/22, 180-181; [208], II, 926-927.
169. Über Apotheken und Drogisten zur Zeit der Abbasiden. - NAALC. 56, 1920, 66-68 [208], II, 928- 930.
170. Magnetische Wirkungen nach der Anschauungen der Araber. - Zeitschr. für Physik. 3, 1920, 141-142; [208], II, 931-932.
171. Über Gesetzmäigkeit bei Pflanzen nach al Bîrûnî. - Biologisches Zentralblatt. 40, 1920, 113-116; [208], II, 943-946.
172. Beiträge zur Geschichte des Zuckers. - Deutsche Zuckerindustrie. 46, 1921, 302-303; [208], II, 947-952.
173. Zur Geschichte der Alchemie. - Zeitschr. für angewandte Chemie. 34, 1921, 522-523, 528-530; [208], II, 953-962.
174. Zur Alchemie bei den Arabern. - AGNM. 5, 1922, 2-32; [208], II, 975-1004.
175. Ueber al Kindî's Schrift über Ebbe und Flut. - Ann. der Physik (4). 67, 1922, 374-387; [208], II, 1005-1018.
176. Entsalzung des Meerwassers bei al Bîrûnî. - Chemiker Zeitung. 46, 1922, 230; [208], II, 1019.
177. Meteorologisches aus der Chronologie von al Bîrûnî. - Meteorologische Zeitschr. 39, 1922, 199-203; [208], II, 1020-1024.
178. Zur Astronomie und Mathematik bei Arabern. - Zeitschr. für Instrumentenkunde. 42, 1922, 114-121; [208], II, 1025-1032.
179. Über die angebliche Verwendung des Pendels bei den Arabern. - Zeitschr. für Physik. 10, 1922, 267-268; [208], II, 1033-1034.
180. Inhalt eines Gefäes in verschiedenen Abständen vom Erdmittelpunkt. - Zeitschr. für Physik. 13, 1922, 59-60; [208], II, 1035-1036.
181. Zur Geschichte der Astrologie. - das Weltall. 22, 1922, No 9/12, 109-114, 121-126, 23, 1923, No 1/2, 1-7; [208], II, 1042-1060.
182. Über Lote, Löten und Giessen bei den Arabern. - Zentralzeitung für Optik und Mechanik. 44, 1923, 85-88; [208], II, 1085-1088.
183. Ibn al Haiṯam und seine Bedeutung für die Geschichte der Astronimie. - Deutsche Literaturzeitung. 44, 1923, 114-116; [208], II, 1089-1091.
184. Über Erscheinungen bei der Dämmerung und bei Sonnenfinsternissen nach arabischen Quellen. - AGM. 15, 1923, 43-52; [208], II, 1092-1101.
185. Über die Neunerprobe. - Unterrichtsblatt für Math. und Naturwiss.. 29, 1923, 82-83; [208], II, 1102-1103.
186. Über die Abbildung eines Affenführer und seiner Affen. - Der Islam. 13, 1923, 107-108; [208], II, 1104-1105.
187. Zur Geschichte des Heuschnupfens. - Archiv für Ohren-, Nasen- und Kehlheil-kunde. 111, 1924, 268; [208], II, 1106.
188. Zur Geschichte des Kompasses und zu dem Inhalt eines Gefässes in verschiedenen Abständen vom Erdmittelpunkt. - Zeitschr. für Physik. 24, 1924, 166-168; [208], II, 1107-1109; "Mathematical Geography" [5], 1992, 279-281.
189. Über ein von Ibn Sînâ (Avicenna) hervorgestelltes Beobachtungsinstrument. - Zeitschr. für Instrumentenkunde. 45, 1925, No 6, 269-275; [208], II, 1110-1116.
190. Beiträge zur Mineralogie usw. bei den Arabern. - Studien zur Geschichte der Chemie. Festgabe für O. von Lippmann. Lpz., 1927, 48-54; [208], II, 1204-1210.
191. Kamal al- Din al-Fārisi. - EI. 2, 1927, 704.
192. Karastun. - EI. 2, 1927, 810-813.
193. al-Khwarizmi, Muhammed ibn Musa. - EI. 2, 1927, 912-913
193a. al-Khwarizmi, Muhammed ibn Ahmed. - EI. 2, 1927, 913-914.

194. al-Khazin. - EI. 2, 1927, 1003-1006.
195. al-Khazini. - EI. 2, 1927, 917-938
196. al-Kharaḳi. - EI. 2, 1927, 1027.
197. al-Khudjandi. - EI. 2, 1927, 971.
198. Ḳosṭa b. Luḳa. - EI. 2, 1927, 1081-1082.
199. Ḳuṭb al-Din al-Shirazi. - EI. 2, 1927, 1166-1167.
200. Al-Madjriṭi. - EI. 3, 1936, 96-97.
201. al-Mizan. - EI. 3, 1936, 530-539.
202. al-Biruni. - EI. 5, 1938, 43-44.
203. Hârizmî, Muhammad ibn Mûsâ - IA. 5, 1958, 257-258
203a. Hârizmî, Muhammad ibn Ahmad- IA. 5, 1958, 258-259.
204. Kemâleddin al-Fârisî. - IA. 6, 1960, 569.
205. Kustâ. - IA. 6, 1960, 1031-1034.
206. Kutbeddîn al-Şîrâzî. - IA. 6, 1960, 1049-1051.
207. Aufsätze zur arabischen Wissenschafsgeschichte. 1-2. Hildesheim - N.Y., 1970.
208. Gesammelte Schriften zur arabisch-islamischen Wissenschaftsgeschichte. 1. Schriften 1876-1912. 2. Schriften 1912-1928. 3. Schriften in Zusammenarbeit mit F.Hauser. F.M., 1984.

Wiedemann E. and Frank, Josef

1. Allgemeine Betrachtungen von al Bîrûnî im einem Werk über die Astrolabien. - Beiträge zur Geschichte der Naturwissenschaften. LXI. - SBPMS. 52-53, 1920-1921, 97-121; Wiedemann [207], II, 516-540.
2. Zirkel zur Bestimmung der Gebetszeiten. - Beiträge zur Geschichte der Naturwissenschaften. LXII. - SBPMS. 52-53, 1920-1921, 122-125; Wiedemann [207], II, 541-544.
3. Vorrichtungen zur Teilung der Kreisen und Geraden usw. nach Bîrûnî. - Zeitschr. für Instrumentenkunde. 41, 1921, No 8, 225-236; Wiedemann [208], II, 963-974.
4. Über die Konstruktion der Schattenlinien von Ṯâbit ibn Qurra. - Kongelik. Danske videnskab. selskab., Math.-fys. meddelelser. IV, 9, 1922, 3-24; Wiedemann [208], II, 1061-1082.
5. Die Gebetszeiten im Islam. - ŞBPMS. 58-59, 1926-1917, 1-32; Wiedemann [207], II, 757-788.

Wiedemann, E. and Hauser, Fritz

1. Über die Uhren im Bereich der islamischen Kultur. - NAALG. 100, 5. 1915, 1-272; Wiedemann [208], III. 1211-1482.
2. Über Vorrichtungen zum Heben von Wasser in der islamischen Welt. - Beiträge zur Geschichte der Technik und Industrie. 8, 1918, 121-154; Wiedemann [208], III, 1483-1516.
3. Über Trinkgefäe und Tafelaufsätze nach al-Ǧazarî und den Benû Mûsa. - Der Islam. 8, 1918, 55-93, 268-291; [208], III, 1517-1579.
4. Byzantinische und arabische akustische Instrumente. - AGNT. 8, 1918, 140-166; Wiedemann [208], III, 1580-1606.
5. Über Schalen, die beim Aderla verwendet werden und Waschgefäe nach Ǧazarî. - AGM. 11, 1918, No 1-2, 22-43; Wiedemann [208], III, 1607-1628.
6. Uhr des Archimedes und zwei andere Vorrichtungen. - NAALC. 103, 2, 1918, 160-202; Wiedemann [208], III, 1629-1669.
7. Über eine Palasttüre und Schlösser nach al-Ǧazari. - Der Islam. 11, 1921, 213-251; Wiedemann [208], III, 1670-1708.

Wiedemann, E. and Hell, Josef

1. Beiträge zur Geschichte der Naturwissenschaften. XXIX. Geographisches aus dem mas'ûdischen Kanon von al Bêrûnî. - SBPMS. 44, 1912, 119-125; Wiedemenn [207], I, 822-828; "Mathematical Geography" [7], 1992, 371-377.

Wiedemann, E. and Juynball, Theodorus Willem Jan (1802-1861)

1. Avicennas Schrift über ein von ihm ersonnenes Beobachtungsinstrument. - Acta orientalia. XI. 5, 1926, 81-167; Wiedemann [208], II, 1117-1203.

Wiedemann, E. and Kohl, Karl

1. Einleitung zu Werken von al Charaqî. - Beiträge zur Geschichte der Naturwissenschaften. LXX. SBPMS. 58-59, 1926-1927, 203-218; Wiedemann [207], II, 628-643.

Wiedemann, E. and Mittelberger, Theodor

1. Einleitung von al Zarqâlî zu seiner Schrift über die nach ihm benannte Scheibe. - Beiträge zur Geschichte der Naturwissenschaften. LXIX. SBPMS. 58-59, 1926-1927, 197-202; Wiedemann [207], II, 622-627.

Wiedemann, E. and Müller, Wilhelm

1. Zur Geschichte der Musik. - Beiträge zur Geschichte der Naturwissenschaften. LXVI. SBPMS. 54-55, 1922-1923, 7-22; Wiedemann [207], II, 580-595.

Wiedemann, E., Seidel, E., and Rescher, O.

1. Zur Geschichte des Bades und des Badens bei den Orientalen. - Zeitschr. für phys. und diätet. Therapie. 24, 1920, 239-248; [208], II, 933-942.

Wiedemann, E. and Würschmidt, J.

1. Über eine arabische kegelförmige Sohnenuhr. - AGNT. 7, 1916, 359-376; Wiedemann [208], II, 830-847.

Wilson, William Jerram

1. Al-Jâhiz and Arabic Zoology. Diss. Utah, 1965; Ann Arbor, 1985.

Woepcke, Franz (1826-1864)

1. Notice sur un manuscrit Arabe d'un traité d'algèbre par Aboul Fath Omar Ben Ibrâhîm Alkhayâmî, contenant la construction géométrique des équations cubiques. - J. für die reine und angew. Mathematik. 40, 1850, 160-172; [27], I, 1-13.
2. Notice sur différents morceaux tirés de manuscrits arabes et relatifs à l'histoire des mathématiques. - CR. 31, 1850, 715-717; [27], I, 14-16.
3. Notice sur les traductions arabes de deux ouvrages perdus d'Euclide. - JA (4). 18, 1951, 217-247; [27], I, 17-47.
4. Notice sur une théorie ajoutée par Thâbit ben Korrah à l'arithmétique spéculative des Grecs. - JA (4). 20, 1852, 420-429; [27], I, 257-266.
5. Extrait du Fakhrî, traité d'Algèbre par Aboû Bekr Mohammed Ben Alhaçan Alkarkhî, précédé d'un mémoire sur l'Algèbre indéterminée chez les Arabes. P., 1853; Hildesheim, 1982; [27], I, 267-426.
6. Sur quelques anciennes méthodes de multiplication. Extrait d'une lettre adressée par M.François Woepcke à D.B.Boncompagni. Rome, 1853; [27], I, 427-444.
7. Recherches sur l'histoire des sciences mathématiques chez les orientaux d'après les traités inédits arabes et persans. I. Notice sur les notations algébriques employées par les Arabes. - JA (5). 4, 1854, 348-384; [27], I, 445-482.
8. Recherches sur l'histoire des sciences mathématiques chez les orientaux d'après les traités inédits arabes et persans. II. Analyse et extraites d'un recueil de constructions géométriques par Aboûl Wafâ. - JA (5). 5, 1855, 218-256, 309-359; [27], I, 483-572.
9. Recherches sur l'histoire des sciences mathématiques chez les orientaux d'après les traités inédits arabes et persans. III. Sur une mesure de la circonférence du cercle due aux astronomes arabes et fondée sur un calcul d'Aboûl Wefâ. - JA (5). 15, 1860, 281-320; [27], I, 573-613.
10. Discussion de deux méthodes arabes pour déterminer une valeur approchée de sin 1°. - J. de math. pures et appl. 19, 1854, 153-176, 301-303; [27], I, 614-640.
11. Note sur des notations algébriques employées par les Arabes. - CR. 39, 1854, 162-165; [27], I, 641-644.
12. Sur une donnée historique relative à emploi des chiffres indiens par les Arabes. - Ann. de scienze mat. e fis. 6, 1855, 321-323; [27], I, 645-647.
13. Essai d'une restitution de travaux perdus d'Apollonius sur les quantités irrationelles, d'après des indications tirées d'un manuscrit arabe. - Mémoires présentés par divers savants à l'Académie des Sciences de l'Institut de France. 14, 1856, 658-720; [27], I, 648-710.
14. Recherches sur plusieurs ouvrages de Léonard de Pise découverts et publiés par le Prince Balthasar Boncompagni et sur les rapports qui existent entre ces ouvrages et les travaux mathématiques des Arabes. I. Traduction d'un chapitre des Prolégomènes d'Ibn Khaldoûn relatif aux sciences mathématiques. - Atti dell'Accad. Pontif. de'Nuovi Lincei. 10. 1856-57, 236-248; [27], I, 711-723.
15. –Recherches sur plusieurs ouvrages de Leonard de Pise découverts et publiés par le Prince Balthasar Boncompagni et sur les rapports qui existent entre ces ouvrages et les travaux mathématiques des Arabes. II. Traduction du traité d'arithmétique d'Aboûl Haçan Ali Ben Mohammed Alkalçâdî. - Atti dell'Accad. Pontif. de'Nuovi Lincei. 12. 1858-59, 230-275; [27], II, 1-46.
16. Recherches sur plusieurs ouvrages de Léonard de Pise découverts et publiés par le Prince Balthasar Boncompagni et sur les rapports qui existent entre ces ouvrages et les travaux mathématiques des Arabes. III. Traduction d'un fragment anonyme sur la formation des triangles en nombres entiers, et d'une autre traité sur

même sujet par Aboû Dja'far Mohammed Ben Alhoçain. Atti dell'Accad. Pontif. de'Nuovi Lincei. 14, 1861, 211-227, 241-269, 301-324, 343-356; [27], II, 47-130.
17. Über ein in der Königlichen Bibliothek zu Berlin befindliches arabisches Astrolabium. - Abhandl. der Königl. Akad. der Wiss. zu Berlin. Math. Abhandl. 1855, 1-31, [27], II, 131-165.
18. Sur l'introduction de l'arithmétique indienne en Occident et sur deux documents publiés par le Prince Balthasar Boncompagni et relatifs à ce point de l'histoire des sciences. - Rome, 1853; JA (5). 13, 1863, 69-79, 514-529; [27], II, 166-236.
19. Notice sur quelques manuscrits arabes relatifs aux mathématiques, et récemment acquis par la Bibliothèque Impériale. - JA (5). 19, 1862, 101-127; [27], II, 237-263.
20. Mémoire sur la propagation des chiffres indiens. - JA (6). 1, 1863, 27-79, 234-290, 442-529; [27], II, 264-461.
21. Sur la construction des équations du quatrième degré par les géomètres arabes. - J. de math. pures et appl. (2), 8, 1863, 57-70; [27], II, 462-475.
22. Passages relatifs à des sommations de séries de cubes extraits de trois manuscrits arabes inédits de la Bibliothèque Impériale. - Ann. di scienze mat. e fis., 5, 1863, 147-181; [27], II, 476-510.
23. Passages relatifs à des sommations de séries des cubes extraits de deux manuscrits arabes du British Museum. - Ann. di matem. pura ed appl.. 6, 1864, 225-248; [27], II, 511-534.
24. Über ein in der Kaiserlichen Bibliothek zu Paris befindliches arabisches Astrolabium. - Bull. de l'Acad. Impériale des Sciences de St.-Pétersbourg, 7, 1864, 220-227; [27], II, 535-540.
25. Introduction au calcul gobârî et hawâî. - Atti dell'Accad. Pontif. de'Nuovi Lincei. 19, 1865-66, 365-383; [27], II, 541-559.
26. Trois traités arabes sur le compas parfait. - NEM. 22, 1874, 1-175; [27], II, 560-734.
27. Études sur les mathématiques chez les Arabes. 1848-1874. 1-2. Avec préface de Fuat Sezgin en français et arabe. F.M., 1986.

Wöhler, Hans-Ulrich

1. Zur Bewegungslehre des Ibn Sina. - "Ibn Sina" [12], 1980, II, 62-68.

Wolfart, Ulrich

1. Die Reisen des Evliya Celebi durch die Morea. F.M., 1966.

Wolfson, Harry A. (1887-1974)

1. Averroes' Lost Treatise on the Prime Mover. - The Hebrew Union College Annual. 23, 1950-1951, 683-710.

Worrell, W. H.

1. Qusta ibn Luqa on the Use of the Celestial Globe. - Isis. 35, 1944, No 4, 285-293.

Worrell, W. H. and Rufus, W. C.

1. Maridini's Introduction to the Use of the Quadrant. - Scripta Mathematica. 10, 1944, 170-180.

Wright, O.

1. The Modal System of Arab and Persian Music. A.D. 1250-1300. Px., 1978.

Wright, R. Ramsay (1852-1933) and Wiedemann E.

1. Über die Schrift "Astronomica quedam" von Greaves. Beiträge zur Gesciche der Naturwissenschaften LXXVII. - SBPMS. 58-59, 1926-1927, 381-386; Wiedemann [207], II, 695-700.

Wright, William

1. A Short History of Syriac Literature. L., 1864.

Würschmidt, J. W.

1. Geodätische Messinstrumente und Messmethoden bei Gerbert und bei den Arabern: - Archiv der Mathematik und Physik (3). 19, 1911, 315-320.
2. Die Theorie des Regensbogens und des Halo bei Ibn al Haiṯam und bei Dietrich von Freiburg. - Meteorologische Zeitschr., 31, 1914, 484-487.
3. Zur Geschichte, Theorie und Praxis der Camera obscura. - Zeitschr. für math. und naturwiss. Unterricht. 46, 1915, 466-476.
4. Zur Theorie der Camera obscura bei Ibn al-Haiṯam. - SBPMS. 46, 1914, 151-154.
5. Die Zeitrechnung im Osmanischen Reich. - Deutsche optische Wochenschr. 1917, 88-100.
6. Ein türkisch-arabisches Quadrant-Astrolab. - AGNT. 8, 1918, 167.

7. Die Bestimmung der krummen Stunden der Deklination und der Gebetszeiten mittels des Astrolab. - Mitteil. zur Geschichte der Medizin und der Naturwiss., 18, 1919, 183-190.
8. Die Schriften Cedosis über die Höhenparallelen und über die Sinustafel (Zum Gebrauch des Quadranten im Islam). - SBPMS. 60, 1928, 127-154.

Wüstenfeld, Ferdinand (1808-1899)

1. Geschichte der arabischen Ärzte und Naturforscher. Göttingen, 1840.
2. Die Geschichtsschreiber der Araber und ihre Werke. Göttingen, 1882.
3. Schriften zur arabisch-islamischen Geographie. 1-2; re-ed. with introduction in German and Arabic by Fuat Sezgin. F.M., 1986.

Yabuuti, Kiyosi

1. Indian and Arabian Astronomy in China. - Silver Jubilee Volume of the Zinbun-Kogaku-Kenkyusyo Kyoto University. Kyosto, 1954.
2. Islamic Astronomy in China. - ACIHS X (Ithaca, 1962). 1, 1964, 555-557.
3. The Influence of Islamic Astronomy in China. - "From Deferent to Equant" [1]. 1987, 547-559.

Yadegari, Mohammed

1. The Use of Mathematical Induction by Abu Kamil Shuja` ibn Aslam (850-930). - Isis. 69, 1978, No 247, 259-262.
2. The Binomial Theorem: a Widespread Concept in Medieval Islamic Mathematics. - HM. 7, 1980, No 4, 401-406.

Yakubov, Mirjuma and Sobirov, Gadoyboy

1. Zhizn' i tvorchestvo Alishaha Bukhari. - Uch. zap. Dushanb. gos. ped. instituta. 83. Trudy kafedry obshchey fiziki. 1972, 144-151.

Yakubov. Yu.

1. Geograficheskiye svedeniya o Maverannahre v trudakh srednevekovykh uchonykh Vostoka. - IAN Taj. SSR, otd. fiz.-mat., khim. i geol. nauk. 1980, No 3, 86-95.

Yakubovskiy, Aleksandr Yur'yevich (1886-1953)

1. Vremya Avitsenny. - IAN SSSR, ser. obshch. nauk. 1938, No 3, 93-108.
2. Abu Ali Sina i yego vremya. - Voprosy istorii. 1952, No 9, 87-110.
3. Ibn Sina. - "Ibn Sina" [5], 1953, 2-59.

Yaltkaya, Şerefettin [Sharaf al-Din]

1. Mashahiri muhandisini `arabdan Banu Musa. Istanbul, 1321 h. [1903].
2. Mukaddime. Kâtib Çelebi'nin hayatı. Kâtib Çelebi'nin ilmî şahsiyeti. - Hajji Khalifa [6], I, 1941, 8-28.

Yaltkaya, Ş. and Adnan, A.

1. Âmilî. IA. 1, 1950, 405-406.

Yano, Michio

1. The Horoscopes in the Chinese Version of Kushyar's Book on Astrology. - ACIHS XVIII, 1989, Q2, 9.
2. Kushyar ibn Labban. - ENWC. 1997, 506-507.

al-Ya`qubi (No 105)

1. al-Ya`qûbî. Historiae (Ta'rîkh). Ed. M.Th.Houtsma, 1-2, Lugduni-Batavorum, 1883.
2. Kitab al-buldan, ta'lif Ahmad ibn Abi Ya`qub ibn Wadih al-ma`ruf bi'l-Ya`qubi. Kitâb al-boldân, auctore Ahmad ibn abi Ja`qûb ibn Wadhih al-Kâtib al-Ja`qûbî. - Bibliotheca geographorum arabicorum. Ed. M.J.de Goeje, 7. Lugduni Batavorum. 1892, 231-360.
3. Ya`kubi. Istoriya. Materialy po istorii Azerbayjana. Per. P.K.Juze. Baku, 1927.
4. Ya`qubi. Les Pays. Trad. par G.Wiet. Le Caire, 1937.
5. Ta'rikh. 1-2. Beirut, 1960.

Yaqut (No 557)

1. Jacut's Geographisches Wörterbuch. Herausg. von F.Wüstenfeld. 1-6. Lpz., 1866-1873; re-ed. by Fuat Sezgin, F.M., 1994.

2. The Irshad al-Arib ila ma`rifat al-Adib or Dictionary of Learned Men of Yaqut. Ed. by D.S.Margoliuth. 1-7. Leyden-L., 1907-1927.
3. Irshad al-arib. 1-20. al-Qahira, 1938.
4. Mu`jam al-buldan. 1-5. Beirut, 1374-1376 h. [1955-1957].
5. The Introductory Chapters of Yaqut's Mu`jam al-Buldan. Transl. and annotated by Wadie Jwaidah. Washington, 1959.
6. Mu`jam al-buldan. 1-6. Tehran, 1344 s. h. [1965].
7. Mu`jam al-buldan (Svedeniya ob Azerbayjane). Per. Z.M.Buniatova, P.K.Juze i I.V. Petrushevskogo. Baku, 1983.

Yardley, Peter D.

1. Graphical Solution of Cubic Equation Developed from the Work of Omar Khayyam. - Bull. Inst. Math. Appl. 26, 1990, No 5-6, 122-126.

Yaroshevskiy, Mikhail Grigor'yevich.

1. Istoriya psikhologii. 2-e izd., M., 1976.

al-Yazdi (No 825)

1. Cherefeddin Ali. Histoire de Timur-Bec. Trad. par Petis de la Croix. 1-4. P., 1722, Delft, 1723.
2. Sherefeddin Ali. The History of Timur-bec. Transl. by J. Darby. L., 1723.
3. The Zafarnamah by Maulana Sharafuddin 'Ali of Yazd. Ed. by Maulawi Muhammad Ilahdad. 1-2. Calcutta, 1885-1888.
4. Şerefettin Ali. Timur ve tüzükâti. Mütercim Mustafa Rahmi [Balaban]. Istanbul, 1929.
5. Zafar-nama. Ta'rikh-i `umumi-yi mufassal-i Iran dar dawra-yi Timuriyan li-Maw-lana Sharaf al-Din `Ali Yazdi, ba tashih u ihtimam-i Muhammad `Abbasi. 1-2. Tehran, 1336 s.h. [1957].
6. Sharaf al-Din `Ali-yi Yazdi. Zafar-nama. Tahiya wa tanzim az `Asam al-Din Urunbayuf. Tashkand, 1972. Sharafuddin Ali Yazdiy. Zafarnoma. Nashrga tayyorlash, suz boshi, izoh wa kursatkichlar A.Urinboyevniki. Toshkent, 1972. Sharaf al-Din `Ali Yazdi. Zafar-name. Podgotovka k pechati, predisloviye, prim. i ukazateli A.Urunbayeva. Tash., 1972.

al-Yazdi (No 1080)

1. Ayoun al-Hisab. - Asiatic Researches. 13. Calcutta, 1828, 461-500.

Yazıcı, Tahsin

1. Şeref ed-Dîn Alî Yazdî. - IA. 11, 1968, 427-428.

Yellin, D. and Abrahams, J.

1. Maimonides. Philadelphia, 1903; 1936.

"Yemen"

1. Yemen - 3000 years of art and civilization in Arabia Felix. Ed. W.Daum. Innsbruck, 1990.

Young, J. and Aitken, P.

1. A Catalogue of the Manuscripts in the Library of the Hunterian Museum in the University of Glasgow, 1908, 453-523.

Yousofi, Cholam Hosein

1. Kashifi. - EI^2. 4, 1976, 732-733.

Yuldashev, K. Yu.

1. O sotsial'no-ekonomicheskikh aspektakh tvorchestva al-Khorezmi - "al-Khwarizmi" [4], 1985, 144-148.

Yuldashev, Sh. G.

1. Bukharskiy period zhizni i tvorchestva Ibn Siny. - "Ibn Sina" [10], 1980, 22-24.

Yunisi, Mirwudud Sayyid

1. Fihrist-i Kitabkhana-yi milli Tabriz. 1-2. Tabriz, 1348-1350 s. h. [1969-1971].

Yunusov, A.

1. Fehrasti dastnawishoi tojiki-forsi, I. - Kitobkhanoi dawlatii respublikawii ba nomi Firdawsi. Shu'bai dastnawishoi sharqi. Dushanba, 1971.

Yushkevich [Youschkevitch], Adol'f-Andrey Pavlovich (1906-1993)

1. Omar Khayyam i yego "Algebra". - TIIY. 2, 1948, 499-534; [16], 1996, 11-58.
2. O matematike narodov Sredney Azii v IX-XV vekakh. - IMI. 4, 1951, 455-488; [16], 1996, 59-85.
3. Arifmeticheskiy traktat Muhammeda ben Musa al-Khorezmi. - TIIYT. I, 1954, 85-127.
4. Istoriya matematiki v sredniye veka. M., 1961.
5. Geschichte der Mathematik im Mittelalter. Übers. von V. Ziegler. Lpz., 1964.
6. Über ein Werk des Abu 'Abdallah Muhammed ibn Musa al-Huwarizmi al-Mağusi zur Arithmetik der Inder. - NTM. Beiheft zum 60. Geburtstag von G.Harig. 1964, 21-63.
7. Note sur les déterminations infinitésimales chez Thabit ibn Qurra. - AIHS. 66, 1964, 37-45.
8. O kvadrature paraboly Sabita ibn Korry. - IMEN. 5, 1966, 118-125.
9. Recherches sur l'histoire des mathématiques au Moyen Age dans les pays d'Orient: Bilans et perspectives. - History of Science. 6, 1967, 41-58.
10. Traditions archimédiennes en mathématiques au Moyen Age. - Organon. 4, 1967, 96-97.
11. Issledovaniya po istorii matematiki v stranakh Vostoka v sredniye veka. Itogi i perspektivy. - Trudy Mezhdunar. kongressa matematikov (M., 1966). M., 1968, 664-680; FMSV. 2, 1969, 5-17.
12. Abu'l-Wafa al-Buzjani. - DSB. I, 1970, 39-43.
13. Les Mathématiques Arabes (VIII^{e}-XV^{e} siècles). Trad. M. Cazenave et K. Jaouiche, préface de R. Taton. P., 1976.
14. O trude po arifmetike Muhammada ibn Musy al-Khorezmi. - "al-Khwarizmi" [1], 1983, 17-52; al-Khorezmi [12], 1983, 170-202.
15. O vklade al-Khorezmi v razvitiye arifmetiki i algebry. - ONU. 1983, No 7, 22-28.
16. Matematika v yeyo istorii. M., 1996.

Yushkevich, A. P. and Rosenfeld, B. A.

1. Jemshid Giyas al-Din al-Kashi. - al-Kashi [6], 1956, 320-324.
2. Matematika v stranakh Vostoka v sredniye veka. - INTSV. I, 1960, 349-421.
3. Die Mathematik der Länder des Ostens im Mittelalter. - Sowjetische Beiträge zur Geschichte der Naturwissenschaft. B., 1960, 62-160.
4. Strany islama. - "Istoriya matematiki", 1970, 205-244.
5. Al-Käshi (or al-Kashani). - DSB. 7, 1973, 255-262.
6. Al-Khayyami (or Khayyam). - DSB. 7, 1973, 323-334.
7. Jamshid al-Kashi. Naqaltuhu Da'd al-Husayni. - al-Kashi [10], 1977, 16-30.

Yusuf, S. M.

1. al-Biruni as a mathematician. - "al-Biruni" [9], 1979, 713-715.

Yusuf Ali, A.

1. Al-Biruni's India. - Islamic Culture. 1, 1927, 31-35, 223-230, 473-487.

Yusupov, Erkin Yusup ughli, Bulgakov, P. G., and Ahmedov, A. A.

1. Geniy, pereshagnuvshiy veka. Tash., 1983.

Yusupov, Nuri Valeyevich (1888-1937)

1. Ocherki po istorii razvitiya arifmetiki na Blizhnem Vostoke. Kazan', 1933.

Yusupova, Dilorom Yusup qizi

1. Pis'mo Giyas al-Dina Kashi k svoyemu ottsu iz Samarkanda v Kashan. - "Iz istorii" [3], 1979, 37-64.

Yusupova, Gul'nara Eskender qizi

1. Rol' planetnoy teorii al-Khorezmi v srednevekovoy astronomii. - "al-Khwarizmi" [4], 1985, 192-193.
2. K istorii sferiki i sfericheskoy trigonometrii. - TNKA XXIII-XXVI(m), 1986, 213-220.
3. Muhammad Bakir al-Yazdi i yego primechaniya k "Sferike" Menelaya. Tash., 1989.
4. Sfericheskaya geometriya v kommentariyakh Ibn Iraka k "Sferike" Menelaya. Tash., 1989.
5. Sinus odnogo gradusa: kak yego vychislyali v drevnosti i na srednevekovom Vostoke. - Uzbek. Matem. Zh. 1994, No 7, 193-194.
6. Zwei mittelalteriche arabische Ausgaben der "Sphaerica" des Menelaos von Alexandria. - HM. 22, 1995, No 1, 64-66.

Zahidov, A.

1. Abu Ali ibn Sinoning falsafiy jozishmalari tughrisida. - "Ibn Sina" [9], 1980, 88-98.

Zahidov, Vahid Yuldash ughli

1. Al-Biruni kak myslitel'. - IAN SSSR, seriya istorii i filosofii. 6, 1949, No 2, 120-133; "al-Biruni" [1], 1950, 30-54.
2. Biruni kak pobornik nauki. - IAN Uz. SSSR. 1949, No 8, 106-111.
3. Velikiy myslitel' X-XI v. - "al-Biruni" [2], 1950, 43-68.
4. Urta asr falsafiy ongginining ulugh pahlavoni. - "al-Biruni" [3], 1950, 47-67.
5. Bobirining faoliyati va adabiy-ilmiy merosi haqida. - Babur [13], 1960, 5-52.
6. Tri titana (Abu Nasr al-Farabi, Abu Rayhan Beruni, Abu Ali ibn Sina). Tash., 1973.
7. Ogni istorii. Tash., 1974.

Zahuri, A. W.

1. Al-Biruni, a Great Astronomer, Mathematician and Chronologist. - Hamdard medic. digest. 9, 1965, 7-11.

Zakhoder, Boris Nikolayevich (1898-1960)

1. Quelques anciens manuscrits de l'oeuvre de Nasir al-Din al-Toussi conservés dans les collections sovietiques. - "al-Tusi" [2], 1957, 19-25.

Zaki Afandi, Salih [Zeki Efendi, Salih] (d. 1917)

1. Notation algébrique chez les Orientaux. - JA (9). 10, 1898, No 1, 35-52.
2. Athar baqiyya muhtawiyatning ba'di qismlari dar al-funun-i 'Uthmaniyyada qunf-rans suratida virlamishdir. 1-2. Istanbul, 1329 h. (1911).

Zakuyev, Ähmäd-Körädi Mähämmäd oghlu (1888-1968)

1. Teoriya razuma u arabskih filosofov. - Izv. vostochnogo fakul'teta Azerb. gos. universiteta. 5, 1929, 105-131.
2. Äbuäli Ibn-Sina (häyaty vä äsärläri). - Trudy Instituta filosofii AN Az. SSR. 2, 1946, 69-81.
3. O nekotorykh materialisticheskikh tendentsiyakh v psikhologicheskom uchenii Ibn Siny (Avitsenna). - Trudy Instituta istorii i filosofii AN Az. SSR. 2, 1952, 45-74.
4. Psikhologicheskiye vozzreniya Nasireddina Tusi. - Trudy Instituta istorii i filosofii AN Az. SSR. 6, 1955, 212-241.
5. Psikhologiya Ibn Siny. Baku, 1958.
6. Bähmänyaryn fälsäfi körüshläri. Baky, 1958.
7. Bahmanyar. - FE. I, 1960, 135.
8. Filosofiya al-Nazzama. Baku, 1961.
9. Filosofiya "Brat'yev chistoty". Baku, 1961.
10. Ikhvan as-Safa. - FE. 2, 1962, 398.
11. Nasiréddin Tusi. - FE. 3, 1964, 556.
12. Bahmanyar. - Ocherki po istorii azerbayjanskoy filosofii. I. Baku, 1966, 69-91.
13. Iz istorii araboyazychnoy logiki srednikh vekov. Baku, 1971.

Zamarayev, Vsevolod Sergeevich

1. K istorii izucheniya naslediya al-Khorezmi. - ONU. 1983, No 7, 87-92.
2. Al-Khorezmi v zarubezhnoy nauchnoy literature. Tash., 1984.

Zambaur, E.

1. Manuel de généalogie et de chronologie pour l'histoire de l'Islam. Hanovre, 1927, 1955.
2. Contribution of Zahiru'd-Din al-Bayhaqi to Arabic & Persian Literature. - Islamic Culture. 24, No 1, 1960, 49-62, No 2, 1960, 77-89.

Zarfatti, Gad Benami

1. Munhe ha-matematika ba-sifrut ha-mada'il ha-'ivrit shel yeme habenayim. Mathematical Terminology in the Hebrew Scientific Literature in the Middle Ages. Yerushalayim - Jerusalem, 1968.

al-Zarqali (No 402)

1. Sapheae recentis res doctrinae patris Abrysakh Azarchelis summi astronomi a Joanne Schonero. Norimbergae, 1534.
2. Ibn al-Naqqas al-Zarqalluh. Al-Slakkaziyya. Ed., trad. y estudio por Roser Puig. Ibn al-Naqqash al-Zarqallu. Al-Shakkaziyya. Tahqiq: Ruzi Buwij. Barcelona - Barshaluna, 1986.

Zavadovskiy, Yuriy Nikolayevich (1909-1997).

1. Ibn Sina i yego filosofskaya polemika s Biruni. - "Ibn Sina" [5], 1953, 46-56.
2. Istochniki dlya biografii Ibn Siny. - Tezisy dokladov i soobshcheniy I Vsesoyuz. konferentsii vostokovedov. Tash., 1957, 46-56; 1958, 991-1002..
3. Materialy. dlya bibliografii Abu Ali ibn Siny. Spisok sochineniy Abu Ali ibn Siny v razlichnykh redaktsiyakh yego biografii, sostavlennoy Abu al-Uahidom al-Juzajani. - Izv. AN Taj. SSR, otd. obshch. nauk. 1958, No 2, 91-112.
4. Abu Ali ibn Sina (Opyt kriticheskoy biografii). ADK (fl)., Tash., 1958.
5. Abu Nasr al-Farabi, Vtoroy Uchitel', i Abu `Ali ibn Sina, inache nazyvaemyye al-Farabiyani (2 Farabi). - "al-Farabi" [1], 1975, 100-111.
6. Abu Ali ibn Sina. Zhizn' i tvorchestvo (po tajiksko-persidskim i arabskim rukopis-nym istochnikam). Dushanbe, 1980.

Zawahry, Muhammad Rabi

1. David Anṭaki Prescription. Tahqiq wa dirasa `an tadhkira Daud al-Anṭaki al-`alim al-`arabi. - ISHAS 2, 1979, 39-40, 144-145.

Zayaczkowski, W.

1. Wielcy uczeni Azji Srodkowej - Farabi i Biruni. - Przeglad Orientalistyczny. 3, 1950, 67-72.

Zeitlin, S.

1. Maimonides. A Biography. N.Y., 1955.

Zemanek, Heinz

1. Al-Khwarizmi. his Background and Personality, his Work and his Influence. - Lecture Notes in Computer Science. 122, 1981, 1-81.
2. Dixit Algorizmi. Al'-Khorezmi: proiskhozhdeniye, lichnost', raboty, vliyanie. - Algoritmy v sovremennoy matematike i yeyo prilozheniyakh. I. Materialy mezhdunar. sim-poziuma. Urgench, Uz. SSR, 16-22 sentyabrya 1979 g. Novosibirsk, 1982.
3. The Manuscripts of the Works of al-Khwarizmi. Vienna, 1983.
4. Rukopisi trudov al-Khorezmi. - "al-Khwarizmi" [4], 1985, 115-121.

Zemouli, Touhami

1. L'Urjuza d'Ibn al-Yasamin sur les nombres irrationnels quadratiques. - "al-Multaqi" [1], 1986, 31-33.

Zetterstéen, Karl Wilhelm (1866-1954)

1. Die arabische, persische und türkische Handschriften der Universitätsbibliothek zu Upsala. - Monde Orietale. 22, 1928, No 3, 1-498; 28, 1935, 1-180.
2. al-Ma'mun. - EI. 3, 1934, 221-223.
3. Dja`far b. Muhammad al-Sadiq

Zeuthen, Hieronymus Georg (1839-1920)

1. Forelaesning oven Mathematikens Histoire, Oldtid og Middlalder. Köbenhavn. 1893, 1949.
2. Geschichte der Mathematik im Altertum und Mittelalter. Copenhagen, 1896.
3. Histoire des mathématique en antiquité et aux moyen âges, P., 1901.
4. Sur l'arithmétique géométrique des recs et des Indiens. - BM (3). 5, 1904, 97-112.
5. Die Mathematik in Altertum und in Mittelalter. Lpz., 1912.

Zheltyakov, Anatoliy Dmitriyevich and Tveritinova, A. S.

1. Evliya Chelebi i yego "Kniga puteshestviya". - E.Chelebi [3], I, 1961, 5-14.

Zhukovskiy, Valentin Alekseyevich (1858-1918)

1. Omar Khayyam i "stranstvuyushchiye" chetverostishiya. - "al-Muzaffariyya", sbornik statey uchenikov V.R.Rozena. SPb., 1897, 325-363.
2. V.Zhukovski. Umar-i-Khayyam and the "Wandering" Quatrains. Transl. by E.D. Ross. - JRAS, 1898, 349-366.

Ziauddin, Ahmad

1. Al-Biruni (His life and his works). - Islamic culture. 5, No 3, 1931, 343-351.

2. Al-Biruni's Researches in Trigonometry as Given in the Third Book of Qanun Mas'udi. - Islamic Culture 6, 1932, No 3, 363-369.

Ziegler, C. H.

1. Türkischer Catechismus der Religion. Hamburg, 1792.

Zikrillayev, Fathulla Zikrilla ughli

1. Elementy fiziki v "Perepiske Biruni s Ibn Sinay". - IAN Uz. SSR, ser. fiz.-mat. nauk. 1958, No 1, 89-91.
2. Beruniy va Ibn Sinaning fizika sohasidagi ishlari. - Sovet maktabi, 1960, No 9, 49-54.
3. Raboty Biruni i Ibn Siny v oblasti fiziki. - Voprosy istorii fiz.-mat. nauk. M., 1963, 443-444.
4. Bobolarimiz tabiat haqida. - Fan va turmush, 1969, No 12, 29-31.
5. Raboty Nasiriddina Tusi v oblasti fiziki. - Sbornik materialov po itogam nauchno-issl. rabot Obshchetekhnich. fakul'teta Tashkent. Politekhn. Instituta. 67, 1970, 121-122.
6. Metod opredeleniya udel'nykh vesov sredneaziatskimi uchonymi. - Sbornik materia-lov po itogam nauchno-issl. rabot Obshchetekhnich. fakul'teta Tashkent. Politekhn. Instituta. 67, 1970, 123-125.
7. Raboty Beruni v oblasti fiziki. Tash., 1973.
8. Beruniyning fizika sohasidagi ishlari. Toshkent, 1973.
9. Ba'zi fizik hodisalar haqida Beruniy va Ibn Sina fikrlari. - "al-Biruni" [8], 1973, 170-178.
10. Voprosy fiziki v trudakh Biruni i Ibn Siny. - IMEN. 17, 1975, 88-97.

Zikrillayev, F., Saidmuradov, M., and Usmanova, M.

1. Voprosy fiziki v knige "Kuraza-i tabi'iyat" Ibn Siny. - ACIHS XIII (M., 1971). 3-4, 1974, 152-154.

Zikrillayev, F. and Usmanov, T.

1. Urta Osiyolik olimlarning mekanik asarlarida hodisalari. - Sovet maktabi, 1971, No 5, 34-38.

Zillurrahman, Hakim S.

1. Tafrih al-Qulub, Persian Translation of al-Adwiyah al-Qalbiya of Ibn Sina. Text and Introduction by Hakim Ahmadullah Khan. - SHMS, 12, 1993, No 1-2, 43-58, 147-180.
2. Thabit bin Qurrah and His Family of Physicians. - SHMS, 13, 1993, No 2, 159-170.

Zimmermann, F. W.

1. The Dustur al-Munajjimin of MS. Paris, BN ar. No 5968. - ISHAS 1. 1, 1977, 211; II, 1978, 184-192.

Zinjani, Muhammad Mudarrisi

1. Sargudhasht wa `aqaid-i falsafi-yi Nasir al-Din-i Tusi. Tehran, 1335 s.h. (1956).

Zirikli, Khayr al-Din

1. Al-A`lam. Qamus tarajim li-ashhar al-rijal wa'l-nisa min al-`arab wa'l-musta`ribin wa'l-mustashriqin. 1-10. al-Qahira, 1374-1379 h. [1954-1959].

Zubov, Vasiliy Pavlovich (1899-1963), Rosenfeld, B. A., and Yushkevich, A. P.

1. Ob issledovaniyakh po istorii matematiki srednikh vekov. - IMI. 15, 1963, 51-72.

Zülfü, T. Kemal

1. Türk Matematikçileri. İstanbul, 1958.

Zwettler, Z.

Abu `Uthman `Umar bin Bakr al-Jahiz. - GAC. 1976, 46-49.

INDEX OF AUTHOR NAMES

These names and their identity numbers from the section of known and unknown authors are listed in alphabetical order. Here only the common and popular names of scholars who are examined as independent items in the text are given.

-A-

ABBAS QULI SHARIF RÂZI, No. 01
ABBAS IBN FIRNAS, No. 92
AL-ABBAS IBN AL-RABI', No. 238
AL-ABBAS AL-JAWHARI, No. 43
ABBAS VESİM EFENDİ = see, DARWISH ABBAS WASIM (ABBAS VESİM EFENDİ), No. 1383
ABD AL-AZIZ AL-AKHDARI, No. 982
ABD AL-AZIZ AL-DIRINI, No. 645
ABD AL-AZIZ AL-DUMARI, No. 04
ABD AL-AZIZ HIMADHI, No. 05
ABD AL-AZIZ AL-HUWARI, No. 747
ABD AL-AZIZ IBN ABD AL-AZIZ, No. 744
ABD AL-AZIZ IBN ABD AL-RAHMÂN AL-TABRIZI, No. 03
ABD AL-AZIZ AL-MIKNASI, No. 440
ABD AL-AZIZ AL-QABISI, No. 205
ABD AL-AZIZ SUBHI-ZADA (SUPHİ-ZADE), No. 1292
ABD AL-AZIZ AL-WAZZANI, No. 1357
ABD AL-FATTAH AL-DAYSATI, No. 1261
ABD AL-GHANI IBN AL-ARABANI, No. 822
ABD AL-HALIM AL-QAYSARI SÖYLEMEZ-ZADA (ABDULHALİM AL-KAYSERİ SÖYLEMEZ-ZADE), No. 1312
ABD AL-HAMID IBN TURK AL-KHUTTALI, No. 59
ABD AL-HAQQ IBN AL-HAIM AL-GHAFIQI, No. 531
ABD AL-HAQQ IBN SABIN, No. 501
ABD AL-JABBÂR KHUJANDI, No. 07
ABD AL-JABBAR AL-KHARAQI, No. 469
ABD AL-JAMIL, No. 1297
ABD AL-KARIM IBN FÂRIS, No. 08
ABD AL-KHÂLIQ AL-BUKHÂRI, No. 09
ABDALLAH AL-ALSHI, No. 413
ABDALLAH AL-ANSARI, No. 701
ABDALLÂH ASAD IBN ABI UMAR AL-KÂSHGHARI, No. 011
ABDALLAH AL-ASNI, No. 23
ABDALLAH AL-AZHARI AL-HANBALI, No. 1220
ABDALLAH AL-BALYANI, No. 870
ABDALLAH AL-DANDANI, No. 91
ABDALLAH AL-DARIR, No. 486
ABDALLAH AL-DAWWARI, No. 1117
ABDALLAH AL-HASIB, No. 291
ABDALLÂH IBN ABDÂH SAWIZ, No. 010
ABDALLAH IBN AHMAD, No. 380
ABDALLÂH IBN ASHRAF ṢIDDIQI, No. 012
ABDALLAH IBN AL-FARADI, No. 286
ABDALLAH IBN FIRRUH, No. 405
ABDALLAH IBN HASAN ALI, No. 1396
ABDALLAH IBN AL-KHASHSHAB, No. 482
ABDALLÂH IBN MUHAMMAD AL-HARAWI, No. 016
ABDALLÂH IBN MUHAMMAD IBN AL-MUSTAṢIR, No. 017
ABDALLAH IBN NAWBAKHT, No. 52
ABDALLAH IBN QUTAYBA AL-DINAWARI, No. 94
ABDALLAH IBN RAFI', No. 165
ABDALLAH IBN SALAH DAIR, No. 1144
ABDALLÂH (ILMALLÂH) IBN SHEIKH UBAYDALLÂH IBN SHEIKH ISÂ AL-ṢADIQI AL-SUHRAWARDI, No. 018
ABDALLAH IBN AL-SHIQAQ, No. 311
ABDALLÂH IBN YUSUF IBN ABDALLÂH AL-HALABI, No. 020
ABDALLAH AL-JAMMAILI, No. 553
ABDALLAH AL-KHABRI, No. 392
ABDALLÂH KHURÂSÂNI, No. 014
ABDALLAH KURAYSHI, No. 1263
ABDALLAH AL-MAADANI, No. 484
ABDALLAH MAHARAT KHAN, No. 1415
ABDALLAH AL-MA'MUN, No. 32
ABDALLAH AL-MASARRI, No. 207
ABDALLAH AL-MAWSILI, No. 1369
ABDALLAH AL-MAZANDARANI, No. 752
ABDALLAH AL-MUGHILI, No. 171
ABDALLAH AL-MUNAWI, No. 1234
ABDALLAH AL-MUTHANNA AL-SHARJI, No. 1208
ABDALLAH AL-NASRANI, No. 107
ABDALLAH AL-QUDAI, No. 536
ABDALLAH AL-SARAQUSTI, No. 339
ABDALLAH AL-SAYDANANI, No. 236
ABDALLAH AL-SHARRAT, No. 663
ABDALLAH AL-SHINSHAWRI, No. 1011
ABDALLAH AL-SIQILLI, No. 478
ABDALLAH AL-SIRAFI, No. 202
ABDALLAH SIRAJ AL-DUNYA WA'L-DIN, No. 581
ABDALLAH AL-SUFI, No. 1105
ABDALLAH TABRIZI, No. 713
ABDALLAH AL-THAQAFI, No. 290
ABDALLAH AL-TUJIBI, No. 774
ABDALLAH AL-TULUNI, No. 1129
ABDALLAH AL-WAHRANI, No. 397
ABDALLAH AL-YAFII, No. 739
ABDALLÂH YAZDI, No. 019
ABD AL-LATIF AL-BAGHDADI, No. 568
ABD AL-LATIF AL-DIMASHQI, No. 1340
ABD AL-LATIF IBN AL-KAYYAL, No. 1016
ABD AL-LATIF MUNAJJIM, No. 1403
ABD AL-MAJID AKBAR-SHAHI, No. 992
ABD AL-MAJID AL-SAMULI AL-SUUDI, No. 1248
ABD AL-MALIK AL-QURTUBI, No. 61
ABD AL-MALIK AL-SHIDHUNI, No. 544
ABD AL-MALIK AL-SHIRAZI, No. 499
ABD AL-MALIK IBN AL-QUTIYA, No. 322
ABD AL-MU'TI AL-SIMILLAWI, No. 1246
ABD AL-MUN IM AL-NABTITI, No. 1163
ABD AL-MUNIM AL-AMILI, No. 1014
ABD AL-QADIR AL-ADHAMI, No. 1421
ABD AL-QÂDIR AL-AZHARI, No. 022
ABD AL-QADIR AL-FARADI, No. 976
ABD AL-QADIR AL-FASI, No. 1203
ABD AL-QÂDIR IBN AHMAD IBN SHA'BÂN AL-AWFI, No. 021
ABD AL-QADIR AL-KILANI, No. 473
ABD AL-QADIR AL-MAHALLI, No. 1206
ABD AL-QADIR AL-MANUFI, No. 1018
ABD AL-QADIR AL-MARAGHI, No. 807
ABD AL-QADIR AL-NABTITI AL-QADIRI, No. 1118
ABD AL-QADIR RUYANI, No. 915
ABD AL-QAHIR AL-BAGHDADI, No. 320
ABD AL-QASIM AKOVALI-ZADA(AKOVALI-ZADE HATEM), No. 1049
ABD AL-RAHIM IBN AHMAD IBN MUHAMMAD IBN MUHAMMAD IBN IBRÂHIM IBN KHALID IBN ABDALLÂH, No. 023
ABD AL-RAHIM IBN AL-BANNA, No. 1056

ABD AL-RAHIM IBN SHEIKH MUHAMMAD RIDĀ KARĀBISI, No. 024
ABD AL-RAHIM AL-MARASHI (ABDURRAHİM AL-MAR'AŞİ), No. 1251
ABD AL-RAHIM AL-MIZZI, No. 665
ABD AL-RAHIM AL-QAZWINI AL-AJAMI, No. 1086
ABD AL-RAHIM AL-SHAMUQI, No. 480
ABD AL-RAHIM SIDDIQI FAKHRI, No. 1078
ABD AL-RAHMAN AL-AKHDARI, No. 984
ABD AL-RAHMAN AL-AQFAHSI, No. 849
ABD AL-RAHMAN AL-ASHKARI AL-TULUNI, No. 1126
ABD AL-RAHMAN AL-AZHARI, No. 1130
ABD AL-RAHMAN AL-DALAILI AL-QURTUBI, No. 596
ABD AL-RAHMAN AL-FASI, No. 1207
ABD AL-RAHMAN AL-FASI, No. 746
ABD AL-RAHMAN AL-JABARTI, No. 1381
ABD AL-RAHMAN AL-JADARI, No. 790
ABD AL-RAHMAN AL-JAWBARI, No. 617
ABD AL-RAHMAN AL-KALBI, No. 373
ABD AL-RAHMAN AL-KHAZINI, No. 476
ABD AL-RAHMAN AL-LAKHMI, No. 387
ABD AL-RAHMAN AL-MALAQI, No. 359
ABD AL-RAHMAN AL-MANZILAWI AL-QUDDUSI, No. 1269
ABD AL-RAHMAN AL-MARIDINI, No. 1022
ABD AL-RAHMAN AL-MURADI, No. 388
ABD AL-RAHMAN AL-SUFI, No. 212
ABD AL-RAHMAN AL-SUSI AL-JAZULI, No. 1083
ABD AL-RAHMAN AL-TARABULUSI AL-TAJURI, No. 1008
ABD AL-RAHMAN AL-UMRI AL-HANAFI, No. 1096
ABD AL-RAHMAN AL-WAFAI AL-KATIB, No. 1131
ABD AL-RAHMAN AL-YAHSABI, No. 398
ABD AL-RAHMAN AL-ZAJJAJI, No. 177
ABD AL-RAHMAN EFENDI AL-MUHANDIS, (ABDURRAHMAN EFENDİ AL-MUHANDİS)No. 1288
ABD AL-RAHMAN IBN UTHMAN(ABDURRAHMAN B OSMAN), No. 1127
ABD AL-RAHMAN IBN AL-MUHALLABI, No. 828
ABD AL-RAHMAN IBN BADR, No. 261
ABD AL-RAHMAN IBN KHALDUN, No. 771
ABD AL-RAHMAN JAMI, No. 882
ABD AL-RAHMAN MUAYYAD-ZADA (MÜEYYED-ZADE), No. 935
ABD AL-RAZZAQ IBN AL-FUWATI, No. 676
ABD AL-SALĀM IBN AHMAD IBN ZĀNUR, No. 025
ABD AL-SALAM AL-ILMI, No. 1360
ABD AL-SALAM AL-IFRIQI, No. 441
ABD AL-SAMAD AKBAR-KHAN, No. 1296
ABD AL-WAHHAB KAWALALI ZADA (ABDULVAHAB KAVALALIZADE), No. 1111
ABD AL-WAHHAB AL-MARIDINI, No. 798
ABD AL-WAHHAB AL-SIRAJI, No. 1202
ABD AL-WAHID AL-JUZJANI, No. 318
ABD AL-WAHID IBN MUHAMMAD, No. 791
ABD AL-WALI, No. 026
AL-ABHARI = see, AMIN AL-DIN AL-ABHARI, No. 682
AL-ABHARI = see, ATHIR AL-DIN AL-ABHARI, No. 595
AL-ABHARI = see, MUHAMMAD IBN MUFADDAL AL-ABHARI, No. 615
ABHD-ISHO' BAR BERIKHA, No. 673
ABRAHAM ZACUTO, No. 923
ABU'L-ABBĀS AHMAD IBN ABD AL-JALIL AL-SHARAIBI, No. 030
ABU'L-ABBĀS AHMAD IBN ISMAIL AL-ṢUFI, No. 041
ABU'L-ABBAS AL-AMULI, No. 248
ABU'L-ABBAS AL-BIRUNI, No. 1392
ABU'L-ABBAS IBN HAMDUN, No. 44
ABU'L-ABBAS IBN YAHYA, No. 139
ABU'L- ABBAS AL-IRANSHAHRI, No. 104
ABU'L-ABBĀS AL-SHĀFII, No. 02
ABU ABD AL-MALIK AL-THAQIFI, No. 209
ABU ABDALLAH IBN AL-BALANSI, No. 255
ABU ABDALLAH AL-MARIATI, No. 1295
ABU ABDALLĀH AL-KHAṬṬĀB, No. 013
ABU ABDALLĀH AL-MARUNI, No. 015
ABU ABDALLĀH MUHAMMAD IBN ALI AL-SANHĀJI, No. 0181
ABU ABDALLĀH MUHAMMAD IBN ALI, No. 0174
ABU ABDALLĀH MUHAMMAD IBN UMAR IBN ḤUSAYN AL-SHIRĀZI, No. 0159
ABU ABDALLĀH MUHAMMAD IBN AHMAD AṬṬĀR AL-BAHRI, No. 0172
ABU ABDALLĀH MUHAMMAD IBN AL-ARABI IBN ABD AL-RAHMAN MUFARRIGH AL-SHAFSHAWĀNI AL-ANDALUSI, No. 0186
ABU'L-ALA IBN KARNIB, No. 154
ABU'L-ALĀ MUHAMMAD IBN AHMAD AL-ISFARAINI, No. 0170
ABU ALI AL-FARISI, No. 661
ABU ALI AL-MATTIJI, No. 449
ABU ALI AL-MISRI, No. 445
ABU ALI AL-SUFI, No. 216
ABU ALI IBN ABI QURRA, No. 101
ABU ALI IBN SINA, No. 317
ABU ALI AL-ḤUSAYN IBN IBRĀHIM AL-SAMARKAND I, No. 0110
ABU AMR (ABU ABDALLĀH) MUHAMMAD IBN ABI'L-QĀSIM AL-ANDALUSI, No. 0210
ABU'L-ASBAGH ABD AL-AZIZ, No. 428
ABU ASIM ISAM, No. 12
ABU BAKR, No. 275
ABU BAKR, No. 336
ABU BAKR ABDALLAH, No. 1293
ABU BAKR AL-HAMILI, No. 741
ABU BAKR AL-HASAN IBN AL-KHASIB, No. 99
ABU BAKR IBN ABIS, No. 337
ABU BAKR IBN AHMAD AL-SABTI, No. 078
ABU BAKR IBN AL-IMAM, No. 912
ABU BAKR IBN MUHAMMAD AL-QUDAI AL-QALILUSI, No. 079
ABU BAKR IBN AL-MUSHRIF, No. 812
ABU BAKR AL-KARAKI, No. 725
ABU BAKR AL-YAMANI, No. 760
ABU BAKR-SHAH IBN MAHMUD-SHAH, No. 1182
ABU'L-BARAKAT QADIRI HINDUSTANI, No. 1062
ABU 'L-FARAJ IBN AL-IBRI, No. 633
ABU'L-FATH HAYDAR IBN AL-ḤASAN AL-IKLILI, No. 0104
ABU'L-FADL AL-HAYYANI, No. 237
ABU'L-FATH IBRĀHIM IBN ḤĀJI ZANJĀNI, No. 0118
ABU'L-FATH AL-SAMARKANDI, No. 220
ABU'L-FATH UMAR IBN MUHARRAR YUSUF, No. 0278
ABU'L-FATTAH AL-DANUSHIRI, No. 1216
ABU'L-FADL ABD AL-AZIZ IBN ABI JUMA AL-TUJIBI, No. 06
ABU'L-FAZL ALLAMI, No. 1047(478a)
ABU 'L-FIDA AL-AYYUBI, No. 680(392)
ABU'L-FUTUH ASAD IBN ABU'L-FADAIL IBN KHĀLID AL-AJALI, No. 070
ABU'L-FUTUH ASAD, No. 086
ABU'L-FUTUH TUSTARI, No. 087
ABU'L-GHANĀ'IM (ABU'L-ḤASAN) SHĀKIR IBN KHALĪL, No. 0267
ABU HANIFA AL-DINAWARI, No. 97
ABU'L-HAMID AL-QADI, No. 111
ABU'L-HASAN AL-ABIWARDI, No. 995
ABU'L-ḤASAN ALI AL-BAHMANI, No. 055
ABU'L-HASAN AL-MISRI AL-SAMARKANDI, No. 343
ABÙ'L-HASAN AL-SHAMSI AL-HARAWI, No. 293
ABU'L-LUṬF AL-ḤIṢNIKAYFI (AL-ḤIṢKAFI) AL-MAQDISI, No. 0141
ABU'L-HASAN HUSAYNI, No. 1150
ABU'L-HASAN IBN ABI RAFI', No. 122
ABU'L-ḤASAN KĀSHĀNI, No. 098
ABU'L-ḤASAN AL-SHIRĀZI, No. 0102
ABU HASHIM AL-JUBBAI, No. 150
ABU HILAL= see, AL-HASAN AL-ASKARI, No. 279

ABU 'L-HUDHAYL AL-ALLAF, No. 22
ABU'L-HUSAYN AL-DASKARI, No. 475
ABU ISHAQ, No. 970
ABU ISHAQ ABDALLAH (ABU ISHAK), No. 950
ABU ISHÂQ GHIYÂTH AL-DIN MUHAMMAD ASHIQI KIRMÂNI, No. 0187
ABU ISHÂQ IBRÂHIM AL-TÂDILI, No. 0120
ABU ISHAQ KUBNAWI, No. 833
ABU JA'FAR AL-KHAZIN, No. 194
ABU JA'FAR IBN HABASH, No. 86
ABU JA'FAR TABARI, No. 409
ABU'L-JUD IBN AL-LAYTH, No. 342
ABU KAMIL AL-MISRI, No. 124
ABU'L-KHAYR TASHKUBRI-ZADA (TAŞKÖPRİ-ZADE), No. 974
ABU'L-MAJD AL-KATIB, No. 644
ABU MA'SHAR JA'FAR AL-BALKHI, No. 88
ABU MA'SHAR SULṬÂN, No. 0154
ABU MANṢUR AL-NAYRIZI, No. 0152
ABU MANṢUR AL-ṬUSI, No. 0153
ABU MUHAMMAD ABD AL-KARIM, No. 432
ABU MUHAMMAD AL-ADLI AL-QAINI, No. 315
ABU MUHAMMAD AL-RAZI, No. 351
ABU MUHAMMAD AL-SAYFI, No. 247
ABU MUQRI' ABD AL-HAQQ AL-BATTIWI, No. 722
ABU MUTI' AL-BALKHI, No. 529
ABU NAṢR AHMAD IBN ZARIR, No. 051
ABU NASR GHARS AL-NA'MA, No. 621
ABU NASR IBN IRAQ, No. 299
ABU'L-QÂSIM AHMAD IBN ABI BAKR, No. 035
ABU'L-QASIM AL-BALKHI, No. 401
ABU'L-QASIM AL-KA'BI, No. 146
ABU'L-QASIM AL-MUNAJJIM, No. 129
ABU'L-QÂSIM AL-MUẒAFFAR IBN ALI IBN AL-MUẒAFFAR "IBN ABI ṬÂHIR", No. 0243
ABU'L-QASIM AL-QASRANI, No. 294
ABU RASHID AL-NAYSABURI, No. 159
ABU'L-RAYHAN AL- BIRUNI, No. 348
ABU SAID AL-SIJZI, No. 296
ABU SAID SHADHAN, No. 89
ABU'L-SALAH AL-GHIYATHI, No. 907
ABU SALIM AL-SAMLALI (AL-SİMLALI), No. 947
ABU'L-ṢIDDIQ AHMAD IBN ÎSÂ AL-AJABI, No. 040
ABU SULAYMÂN AL-BAHRI, No. 0264
ABU SHAKIR, No. 979
ABU 'L-WAFA AL-BUZJANI, No. 256
ABU' L-WAFA IBN SAID, No. 824
ABU YAHYA AL-BATRIQ, No. 14
ABU YAHYA AL-MARWAZI, No. 151
ABU YAZID AL-BISTAMI, No. 996
ABU YUSUF AHMAD, No. 755
ABU YUSUF AHMAD IBN AL-HUSAYN AL-HÂSIB, No. 038
ABU ZAYD AL-ASMAI, No. 30
ABU ZAYD AL-BALKHI, No. 156
ABU ZAYD AL-ḤASAN IBN UBAYDALLÂH AL-FÂRISI, No. 0103
ACEM SİNAN = see, AJAM SINAN (ACEM SİNAN), No. 922
AL-ACEMİ = see, HAFIZ AL-DIN AL-AJAMI (AL-ACEMİ), No. 965
ADHARKHURA-YI YAZDANKHASIS, No. 345
ADNAN IBN AYNZARBI, No. 460
AFDAL AL-DIN UMAR IBN UNLÂQ, No. 0280
AFIF AL-DIN BA MAKHRAMA, No. 960(014)
AHAVAYN = see, MUHYI AL-DIN AL-AKHWIN (AHAVAYN), No. 893
AL-AHDAB, No. 642
AL-AHDAB = see, NAJM AL-DIN AL-AHDAB, No. 643
AHMAD AL-ABBAR, No. 1146
AHMAD AL-AHWAZI, No. 193
AHMAD AL-ASHARI AL-YAMANI, No. 447
AHMAD AL-ASWANI, No. 481
AHMAD AYYAD AL-MAHALLI, No. 1252
AHMAD BABA AL-TINBUKTI, No. 1091
AHMAD AL-BAHRANI, No. 1268
AHMAD AL-BAKHANIQI, No. 727
AHMAD AL-BASATI, No. 776
AHMAD AL-BASHTAQI, No. 1212
AHMAD BISHARA AL-DIMYATI, No. 1254
AHMAD AL-BISTAMI, No. 897
AHMAD AL-BUNI, No. 554
AHMAD AL-DABBI, No. 513
AHMAD AL-DAI, No. 809
AHMAD AL-DAMAMINI, No. 1215
AHMAD AL-DAWWARI, No. 1115
AHMAD AL-DAYRABI AL-GHUNAYMI, No. 1346
AHMAD EFENDİ BRUSI (İSHAK HOCASI), No. 1272
AHMAD AL-FARABI, No. 426
AHMAD AL-FARADI, No. 758
AHMAD AL-FARGHANI, No. 67
AHMAD AL-GHANDAJANI, No. 356
AHMAD AL-HALABI, No. 829
AHMAD AL-HALABI, No. 905
AHMAD HAMZA AL-JAWHARI, No. 1356
AHMAD AL-HANAFI, No. 1242
AHMAD AL-HARAWI, No. 271
AHMAD AL-HARAZYAKI, No. 840
AHMAD AL-HARIRI, No. 770
AHMAD AL-HUSAYNI AL-YAMANI, No. 1125
AHMAD IBN ABDALLÂH AL-BARAKADINI, No. 031
AHMAD IBN ABI USAYBIA, No. 601
AHMAD IBN AHMAD IBN JA'FAR, No. 032
AHMAD IBN ALI AL-FÂKHURI, No. 033
AHMAD IBN ALI IBN UMAR IBN ṢÂLIH AL-IRBILI, No. 034
AHMAD IBN AL-BANNA, No. 696
AHMAD IBN AL-DAYA, No. 80
AHMAD IBN DIMJ, No. 407
AHMAD IBN FARIS AL-QAZWINI, No. 280
AHMAD IBN AL-HAJIB, No. 515
AHMAD IBN HASAN IBN MUHAMMAD IBN HASAN HAR ÂMILI, No. 037
AHMAD IBN HAYDAR, No. 1095
AHMAD IBN IBRAHIM AL-SANJARI, No. 297
AHMAD IBN ISÂ, No. 039
AHMAD IBN AL-KAMMAD, No. 530
AHMAD IBN MAHMUD AL-YAZDI, No. 043
AHMAD IBN MAJID, No. 904
AHMAD IBN MUHAMMAD, No. 1294
AHMAD IBN AL-MUTHANNA, No. 210
AHMAD IBN NASR, No. 170
AHMAD IBN AL-QASS AL-TABARI, No. 175
AHMAD IBN AL-QUNFUDH AL-QUSANTINI, No. 780
AHMAD IBN RUSTA, No. 112
AHMAD IBN AL-SAFFAR AL-GHAFIQI, No. 312
AHMAD IBN SHIHÂB AL-DIN, No. 049
AHMAD IBN AL-SURA, No. 458
AHMAD IBN TAMIRBUQA, No. 908
AHMAD IBN THABAT, No. 602
AHMAD IBN YUSUF IBN ABD AL-QÂDIR AL-JAZIRI, No. 050
AHMAD AL-IRAQI, No. 799
AHMAD AL-JAYHANI, No. 201
AHMAD AL-JUZJANI, No. 700(401)
AHMAD AL-KARABISI, No. 224
AHMAD AL-KHALIDI, No. 860
AHMAD KHALIFA, No. 042
AHMAD AL-KHATIB AL-BAGHDADI, No. 386
AHMAD AL-KHATIRI, No. 538
AHMAD AL-KHATUNABADI, No. 1271
AHMAD AL-KHAZRAJI, No. 523
AHMAD AL-KUTUBI AL-KHARAQANI, No. 1210
AHMAD LAHURI, No. 1106
AHMAD AL-MAQQARI, No. 1099
AHMAD AL-MAQRIZI, No. 810
AHMAD AL-MAZRUQI, No. 307
AHMAD AL-MISRI, No. 119
AHMAD AL-MUFTI FILIBE, No. 1333
AHMAD AL-MUQTADIR, No. 390

AHMAD AL-MUTARRIFI, No. 1027
AHMAD AL-NAHAWANDI, No. 39
AHMAD AL-NAIB IBN HUSAYN IBN MUHAMMAD AL-AWSI AL-ANṢĀRĪ AL-ṬARÂBULUSI, No. 045
AHMAD NÂṢIR, No. 046
AHMAD NIZAMI SAMARKANDI, No. 453
AHMAD AL-QALANISI, No. 677
AHMAD AL-QARAFI, No. 631
AHMAD AL-QASTALANI AL-MISRI, No. 942
AHMAD AL-QAYRAWANI, No. 1337
AHMAD AL-RAJI, No. 1301
AHMAD AL-RAMADÂNI IBN MUHSIN AL-WAZIRI, No. 047
AHMAD AL-RASMUKI, No. 1313
AHMAD AL-SADAFI, No. 379
AHMAD AL-SAFFAR, No. 325
AHMAD AL-SAGHANI, No. 223
AHMAD AL-SALANIQI MUNAJJIM-BASHI, (MÜNECCİMBAŞI AHMED DEDE) No. 1239
AHMAD AL-SARAKHSI, No. 100
AHMAD AL-SHADHILI, No. 762
AHMAD SHIRAZI, No. 736
AHMAD AL-SUFI AL-MAQSI, No. 659
AHMAD AL-SUJAI, No. 1377
AHMAD AL-SUNBATI, No. 1002
AHMAD AL-TAFTAZANI, No. 906
AHMAD AL-TAMIMI, No. 578
AHMAD AL-TIFASHI, No. 585
AHMAD AL-TILIMSANI, No. 1225
AHMAD AL-TUNAYZI, No. 303
AHMAD AL-UQLIDISI, No. 232
AHMAD AL-YA'QUBI, No. 105
AHMAD YAZIJI OGHLU BICAN (YAZICIOĞLU AHMED BİCAN), No. 843
AHMAD AL-ZUNURI, No. 986
AL-AHWAL = see, AL-HASAN AL-AHWAL, No. 153
AJAM SINAN (ACEM SİNAN), No. 922
AL-AJAMI = see, HAFIZ AL-DIN AL-AJAMI (AL-ACEMİ), No. 965
AL-AJMAWI = see, SHIHAB AL-DIN AL-AJMAWI, No. 1076
AL-AKHDARI = see, ABD AL-AZIZ AL-AKHDARI, No. 982
AKBAR-KHAN = see, ABD AL-SAMAD AKBAR-KHAN, No. 1296
AKOVALI-ZADE HATEM = see, ABD AL-QASIM AKOVALI-ZADA(AKOVALI-ZADE HATEM), No. 1049
AL-AKPINARİ = see, MUHAMMAD AGHA AQBUNARI (AL-AKPINARİ), No. 981
ALA' AL-DIN AL-YASHKARI, No. 622
ALA' AL-DIN IBN AL-SHATIR, No. 750
ALA' AL-DIN IBN AL-TURKUMANI, No. 716
AL-ALA IBN SAHL, No. 302
ALA AL-KIRMANI, No. 329
ALAM AL-DIN AL-HANAFI, No. 583
ALI AL-ADIB, No. 429
ALI AHMAD PESHAWARI QĀDIRI AFGHĀNI BĀBARI, No. 053
ALI AL-ANTAKI, No. 219
ALI AL-ASHARI, No. 158
ALI AL-ASTURLABI, No. 47
ALI AL-BAKRI, No. 490
ALI AL-BAYSUSI, No. 1379
ALI AL- BAZDAWI, No. 394
ALI AL-DADASI, No. 1194
ALI AL-FARADI, No. 759
ALI AL-FARGHANI AL-MARGHINANI, No. 504
ALI AL-HANAFI AL-RASHIDI, No. 1228
ALI AL-HARAWI, No. 543
ALI AL-HASHIMI, No. 306
ALI AL-ḤASIB, No. 056
ALI AL-HAYTHAMI AL-TUBNAWI, No. 777
ALI AL-HUSAYNI AL-ISFAHANI, No. 875
ALI IBN ABFL-RIJAL, No. 353
ALI IBN ABI TALIB, No. 1
ALI IBN AL-A'LAM, No. 211
ALI IBN AL-A'RABI AL-SHAYBANI, No. 19
ALĪ IBN BADR AL-TIRMIDHI, No. 054
ALI IBN BISHR, No. 221
ALI IBN DAWUD, No. 109
ALI IBN AL-DURAYHIM, No. 731
ALI IBN GHANIM AL-MAQDISI, No. 1031
ALI IBN AL-GHARBI, No. 720
ALI IBN IMRANI, No. 185
ALI IBN AL-MAGHRIBI, No. 910
ALI IBN HAMZA AL-MAGHRIBI, No. 1051
ALI IBN HAYDUR AL-TADLI, No. 784
ALI IBN HAZM, No. 374
ALI IBN HIBATALLAH, No. 891
ALI IBN KHALAF, No. 334
ALI IBN KHALIFA, No. 546
ALI IBN ḤAYDARA, No. 057
ALI IBN KHAYR AL-DIN AL-ḤANAFI, No. 059
ALI IBN MADAN, No. 187
ALI IBN MAMI AL-HANAFI, No. 1170
ALI IBN MUHAMMAD IBN ALĪ AL-MAGHRIBĪ AL-BUJAWI, No. 060
ALI IBN MUHAMMAD MA'ṢUM, No. 062
ALI IBN RIDWAN, No. 369
ALI IBN TIBUGHA, No. 763
ALI IBN YUNIS AL-SADAFI, No. 283
ALI IBN YUSUF IBN ALI, No. 065
ALI JA'FARI AL-RUMI, No. 058
ALI AL-JAWHARI, No. 314
ALI AL-JAZULI AL-RASMUKI, No. 1103
ALI AL-JURJANI, No. 788
ALI AL-KHALKHALI, No. 1153
ALI AL-MALAQI, No. 946
ALI AL-MARASHI, No. 1250
ALI AL-MASUDI, No. 186
ALI AL-MISSISI, No. 228
ALI MUHAMMAD IBN IMÂM MUHAMMAD BÂDKUBI, No. 061
ALI AL-MUNAJJIM, No. 191
ALI AL-NABTITI, No. 1119
ALI AL-NASAWI, No. 341
ALI AL-NASRI, No. 605
ALI AL-NAYSABURI, No. 295
ALI AL-QAINI, No. 346
ALI AL-QALASADI, No. 865
ALI AL-QARAFI AL-NAQQASH, No. 847
ALI AL-QAYSI, No. 522
ALI AL-QOMANATI, No. 766
ALI AL-QUSHJI (ALİ KUŞÇU), No. 845
ALI AL-QUSTANTINI AL-GHARNATI, No. 618
ALI RUSTAM, No. 063
ALI AL-SAFAQUSI, No. 1193
ALI SHAH AL-KHWARIZMI AL-BUKHARI, No. 687
ALI AL-SHARIF AL-HUSNI, No. 887
ALI AL-SHIRWANI, No. 443
ALI AL-SULAMI, No. 267
ALI AL-SUMAYSATI, No. 270
ALI AL-TABARI, No. 72
ALI AL-TAMIMI, No. 192
ALI AL-TAWASHI, No. 1116
ALI AL-UDHRI AL-BAGHDADI, No. 769
ALI AL-UJHURI, No. 1232
ALI AL-ZA'TARI AL-MISRI, No. 1223
ALI AL-ZAHRAWI, No. 305
ALI AL-ZAMZAMI, No. 878
ALİ KUŞÇU = see, ALI AL-QUSHJI (ALİ KUŞÇU), No. 845
AL-AMILI = see, BAHA AL-DIN AL-AMILI, No. 1058
AMİR ABD AL-ṚAZZĀQ, No. 066
AMİR IBN ḤUSAYN IṢFAHĀNI, No. 067
AMIN AL-DAWLA IBN AL-QUFF AL-KARAKI, No. 628
AMIN AL-DIN AL-ABHARI, No. 682
AMIN AL-DIN KHAN HUSAYNI HARAWI, No. 1278
AMIN AL-DIN AL-SIDDIQI AL-LAHURI, No. 1372
AMR AL-JAHIZ, No. 76
AMR AL-KARMANI, No. 377
ANAND RAM IBN HEM RAJ, No. 1325

ANAND RAM MUKHLIS, No. 1330
AQA HÂSHIM SHÂH, No. 068
AQATUN, No. 167
AL-AQFAHSI= see, ABD AL-RAHMAN AL-AQFAHSI, No. 849
ARAFA AL-FARADI, No. 879
ARIB AL-QURTUBI, No. 249
ASAD AL-BAYHAQI, No. 425
ASAD EFENDI AL-YANYAWI (YANYALI ESAD EFENDİ), No. 1327
ASAD IBN AHMAD AL-ṢIDDIQI, No. 069
AL-ASAD IBN AL-ASSAL, No. 650
ASBAGH IBN AL-SAMH, No. 310
ASIL AL-DIN HASAN ZAWZANI, No. 611
AL-ASHARI = see, ALI AL-ASHARI, No. 158
AL-ASHMÂWI AL-RIFAI, No. 071
ASIMALLAH IBN ABD AL-RASUL, No. 1300
AṢIM MUHAMMAD KÂẒIM IBN AMIR ḤUSAYNI, No. 072
AL-ASMAI = see, ABU ZAYD AL-ASMAI, No. 30
ASTURLABI = see, MUHAMMAD ZAMAN ASTURLABI MASHHADI, No. 1188
AŞIK ÇELEBİ = see, MUHAMMAD AL-ASHIK CHELEBI (AŞIK ÇELEBİ), No. 1039
ATA AL-SAMARKANDI, No. 748
ATAALLÂH AL-HAKIM KAMÂL AL-DIN ḤUSAYN AL-ṬIBÂ' ṬIBÂ, No. 073
ATAALLAH AJAMI, No. 885
ATA'ALLAH LAHURI, No. 1174
ATAALLAH QADIRI, No. 1077
AYN AL-ZAMAN AL-MARWAZI, No. 424
ATHIR AL-DIN AL-ABHARI, No. 595
AYYUB AL-BASRI, No. 38

-B-

BA MAKHRAMA = see, AFIF AL-DIN BA MAKHRAMA, No. 960
BABA KHWAJA SAMARKANDI, No. 1173
BABUR = see, ZAHIR AL-DIN BABUR, No. 944
BADII, No. 075
BADR AL-DIN AL-FARISI, No. 608
BADR AL-DIN AL-HAMAWI, No. 693
BADR AL-DIN MUHAMMAD IBN AL-KHAṬIB, No. 0199
BADR AL-DIN AL-TABARI, No. 876
BAHÂ AL-DIN AHRÂR, No. 052
BAHA AL-DIN AL-AMILI, No. 1058
BAHÂ AL-DIN AMLISHI, No. 076
BAHMANYAR IBN AL-MARZUBAN, No. 376
AL-BAKHANIQI = see, AHMAD AL-BAKHANIQI, No. 727
BÂKHARZI = see, ISMAIL IBN LUṬFALLÂH BÂKHARZI, No. 0123
BAKHRAQ = see, MUHAMMAD BAKHRAQ, No. 850
BAKR AL-MARADI, No. 140
AL-BAKRI = see, ALI AL-BAKRI, No. 490
BALI MUNAJJIM (MÜNECCİM BALİ), No. 854
BANU AMAJUR AL-TURKI, No. 157
BANU MUSA, No. 74
BAŞ HOCA İSHAK EFENDİ = see, ISHAQ EFENDI (BAŞ HOCA İSHAK EFENDİ), No. 1407
AL-BATRIQ = see, ABU YAHYA AL-BATRIQ, No. 14
AL-BATRIQ = see, YAHYA AL-BATRIQ, No. 53
AL-BATTANI = see, MUHAMMAD AL-BATTANI, No. 137
AL-BAYHAQI, No. 597
BAYLAQ AL-QIBJAQI, No. 649
AL-BAYSUSI = see, ALI AL-BAYSUSI, No. 1379
AL- BAZDAWI = see, ALI AL- BAZDAWI, No. 394
AL- BAZDAWI = see, NIZAM AL-DIN AL-BAZDAWI, No. 756
AL-BIQAI = see, IBRAHIM AL-BIQAI, No. 853
AL-BIRJANDI = see, NIZAM AL-DIN AL-BIRJANDI, No. 938
AL-BIRUNI = see, ABU'L-ABBAS AL-BIRUNI, No. 1392
AL- BIRUNI = see, ABU'L-RAYHAN AL- BIRUNI, No. 348
AL- BITRUJI = see, NUR AL-DIN AL- BITRUJI, No. 526
AL-BUNI = see, AHMAD AL-BUNI, No. 554
BUQRAT AL-SAMARKANDI, No. 1089
AL-BURSAWI (HOCA ABDURRAHMAN EFENDI), No. 1071
BUSTAN IBN MUHAMMAD, No. 634

-C-

CABİ-ZADE HALİL FAIZ = see, KHALIL FAID EFENDI (CABİ-ZADE HALİL FAİZ), No. 1314
AL-CHILLI = see, UMAR AL-MAI AL-CHILLI (AL-ÇULLİ), No. 1342
CHKHATRI MÂL, No. 080
CİHANGİRLİ MUHAMMED SADIK EFENDİ = see, MUHAMMAD SADIQ JIHANGIRI (CİHANGİRLİ MUHAMMED SADIK EFENDİ), No. 1385
CYRIACUS, No. 874
AL-ÇULLİ = see, UMAR AL-MAI AL-CHILLI (AL-ÇULLİ), No. 1342

-D-

AL-DADASI = see, ALI AL-DADASI, No. 1194
DAMADAN AL-MUHI, No. 1281
AL-DAMAMINI = see, AHMAD AL-DAMAMINI, No. 1215
AL-DARIR AL-JURJANI, No. 83
DARWISH ABBAS WASIM (ABBAS VESİM EFENDİ), No. 1383
DARWISH ALI MURWARRID, No. 1128
AL-DASKARI = see, ABU'L-HUSAYN AL-DASKARI, No. 475
AL-DAWWARI = see, AHMAD AL-DAWWARI, No. 1115
DAWUD AL-ALLAMI, No. 300
DAWUD AL-ANTAKI, No. 1044
DAWUD AL-QARSI (AL-KARSİ), No. 1331
DAWUD IBN SULAYMAN, No. 128
AL-DAWWANI = see, JAMAL AL-DIN AL-DAWWANI, No. 894
AL-DAWWANI = see, MUHAMMAD AL-DAWWANI, No. 378
AL-DAYSATI = see, ABD AL-FATTAH AL-DAYSATI, No. 1261
DILDÂR ALI, No. 081
AL-DIMYATI = see, MUHAMMAD AL-DIMYATI, No. 1205
DIRAR IBN AMR, No. 20
AL-DIRINI = see, ABD AL-AZIZ AL-DIRINI, No. 645
DUNAS AL-QARAWI, No. 265

-E-

EFE-ZADE = see, MUHAMMAD AL-BURSAWI (EFE-ZADE), No. 919
ELIAS BAR SHINAYA, No. 349
ELIYA MIZRAHI, No. 943
EVLİYA CHELEBI (EVLİYA ÇELEBİ), No. 1167
EVLİYA ÇELEBİ = see, EVLIYA CHELEBI (EVLİYA ÇELEBİ), No. 1167

-F-

AL-FADL AL-KHUTTALI, No. 115
AL-FADL AL-NAYRIZI, No. 135
AL-FADL IBN NAWBAKHT, No. 17
AL- FADL AL-SARAKHSI, No. 24
AL-FADL AL-USAYFIRI, No. 560
AL-FAHIM, No. 082
FAKHR AL-DIN ABU ABDALLÂH MUHAMMAD IBN ABI'L-QÂSIM IBN TAYMIYYA AL-ḤARRÂNI AL-ḤANBALI, No 0212
FAKHR AL-DIN AL-BIHISHTI, No. 749
FAKHR AL-DIN AL-HILATI, No. 620
FAKHR AL-DIN IBN AL-DAHHAN, No. 506
FAKHR AL-DIN AL-MARAGHI, No. 600
FAKHR AL-DIN AL-RAZI, No. 535
FAKHR AL-MILLAT WA'L-DIN AL-SA' IDI, No. 083
AL-FÂKHURI = see, AHMAD IBN ALI AL-FÂKHURI, No. 033
AL-FANARI = see, MUHAMMAD-SHAH AL-FANARI, No. 806

AL-FARABI = see, AHMAD AL-FARABI, No. 426
AL-FĀRĀBI = see, MUHAMMAD AL-FĀRĀBI, No. 180
AL-FARADI = see, ABDALLAH IBN AL-FARADI, No. 286
AL-FARADI = see, AHMAD AL-FARADI, No. 758
FARAJALLĀH ḤUSAYNI KĀSHĀNI, No. 084
AL-FARGHANI = see, AHMAD AL-FARGHANI, No. 67
AL-FARGHĀNI = see, IBRĀHIM AL-FARGHĀNI, No. 0117
AL-FARGHALI = see, MUHAMMAD AL-FARGHALI, No. 1406
FARID AL-DIN AHMAD, No. 027
FARID AL-DIN AL-DIHLAWI, No. 1092
FARID AL-DIN AL-TUSI, No. 660
AL-FARRA = see, YAHYA AL-FARRA, No. 26
FASIH AL-DIN NIZAMI AL-KUHISTANI, No. 914
FAṢIH IBN ATHIR, No. 085
FATH AL-ASTURLABI, No. 164
FATHALLAH FARUQI, No. 966
FATHI AL-HUSAYNI, No. 672
AL-FAWANISI = see, MUHAMMAD AL-FAWANISI, No. 1028
AL-FAWANISI = see, MUHAMMAD AL-FAWANISI, No. 446
FENARİ-ZADE = see, MUHAMMAD-SHAH FANARI-ZADE (FENARİ-ZADE), No. 921

-G-

GELENBEVİ = see, ISMAIL GALANBAWI (GELENBEVİ), No. 1390
AL-GHAFIQI = see, AHMAD IBN AL-SAFFAR AL-GHAFIQI, No. 312
AL-GHAFIQI = see, MUHAMMAD AL-GHAFIQI, No. 313
AL-GHAFIQI = see, MUHAMMAD AL-GHAFIQI, No. 503
GHALIB AL-HAWWARI, No. 355
GHARS AL-DIN KHALIL AL-HALABI, No. 983
GHASI RAM DIHLAWI, No. 1414
AL-GHAZZALI = see, MUHAMMAD AL-GHAZZALI, No. 415
AL-GHAZZI = see, MUHAMMAD AL-GHAZZI, No. 998
GHIYATH AL-DIN AL-SHIRAZI, No. 963
AL-GHUMRI = see, MUHAMMAD AL-GHUMRI, No. 1253
GHULĀM ḤUSAYN, No. 088
GHULAM-HUSAYN JAWNPURI, No. 1417
GHULĀM RASUL KHALIFA, No. 089
GHULAM ZUHAL, No. 217
AL-GHUMRI = see, MUSA AL-GHUMRI, No. 1275

-H-

HABASH AL-HASIB, No. 46
AL-HABBAK = see, MUHAMMAD AL-HABBAK, No. 831
HABIBALLAH AL-SUNGHURI, No. 881
HABIBALLAH QANNAWJI, No. 1393
HACI ATMACA = see, AL-HAJJI ATMAJA (HACI ATMACA), No. 918
AL-HADI ILA'L-HAQQ, No. 886
HAFIZ AL-DIN AL-AJAMI (AL-ACEMİ), No. 965
AL-HAJJAJ IBN MATAR, No. 34
HAJJI ABD AL-HAMID DIHLAWI, No. 711
AL-HAJJI ATMAJA (HACI ATMACA), No. 918
HAJJI HUSAYN YAZDI, No. 1072
HĀJJI IBN SAID AL-KURASHI, No. 090
HAJJI KHALILALLAH SHIRAZI, No. 1107
AL-ḤAKIM IBN BALGHAZĀN AL-TAMILI, No. 091
AL-HAKIM AL-TIRMIDHI = see, MUHAMMAD AL-HAKIM AL-TIRMIDHI, No. 148
AL-HALABI = see, IBRAHIM AL-HALABI RAGHIB PASHA KHWAJASI (RAGIB PAŞA HOCASI), No. 1349
AL-HALABI = see, IBRAHIM AL-HALABI, No. 959
HAMDALLAH AL-QAZWINI, No. 708
HĀMID BUKHĀRAI, No. 092
HAMID IBN HUSAYN AL-HĀSIB, No. 093
HAMID AL-KHUJANDI, No. 269
HAMID AL-WASITI, No. 116
HAMZA BALİ B. ARSLAN = see, HAMZA IBN ARSLAN (HAMZA BALİ B. ARSLAN) No. 911
HAMZA AL-BAYHAQI, No. 723
HAMZA IBN ARSLAN (HAMZA BALİ B. ARSLAN) No. 911
HAMZA AL-ISFAHANI, No. 196
HANUN AL-YA'MARI, No. 434
AL-HARIRI = see, AHMAD AL-HARIRI, No. 770
AL-HARITH AL-KHURASANI, No. 71
HARUN IBN ABI MANSUR, No. 102
HASAN, No. 094
AL-HASAN AL-AHWAL, No. 153
HASAN AL-AID, No. 1290
AL-HASAN AL-ANSARI, No. 276
HASAN ARUMIHAI, No. 1226
AL-HASAN AL-ASKARI, No. 279
HASAN AL-ASTARABADI, No. 671
HASAN CHELEBI (HASAN ÇELEBİ), No. 834
HASAN ÇELEBİ = see, HASAN CHELEBI (HASAN ÇELEBİ), No. 834
AL-HASAN AL-DARIR, No. 591
HASAN EFENDI SHAṬṬI-ZĀDE, No. 097
AL-HASAN AL-FARISI, No. 519
HASAN AL-FIHRI, No. 684
AL-HASAN AL-HAMDANI, No. 173
AL-HASAN AL-HUBUBI, No. 278
AL-ḤASAN IBN ABD AL-BĀRI' AL-ḤADDĀL, No. 095
HASAN IBN ABD AL-RAHMĀN, No. 096
AL-HASAN IBN AL-BAGHDADI, No. 321
AL-HASAN IBN AL-BAHLUL, No. 288
AL-HASAN IBN AL-HAYTHAM, No. 328
HASAN IBN JAHHAF, No. 1279
AL-HASAN IBN AL-KHAMMAR, No. 266
HASAN IBN KHAYR AL-DIN, No. 099
HASAN IBN AL-MAHALLI, No. 855
HASAN IBN MUHAMMAD, No. 1289
HASAN IBN MUHAMMAD QĀDĪ HASAN, No. 0101
AL-HASAN IBN NAWBAKHT, No. 51
AL-HASAN IBN AL-TARRAH, No. 569
AL-HASAN IBN WAHB, No. 145
HASAN AL-JABARTI, No. 1367
AL-HASAN AL-KARADISI AL-TUBNI, No. 856
AL-HASAN AL-KIRMANI, No. 319
HASAN AL-MAKKI, No. 1041
AL-HASAN AL-MARRAKUSHI, No. 592
HASAN MUHAMMAD, No. 0100
HASAN MUHAMMAD AL-FIRSHURI, No. 1054
AL-HASAN AL-NAWBAKHTI, No. 127
AL-HASAN AL-QUMMI, No. 273
AL-HASAN AL-SABBAH, No. 70
AL-HASAN AL-SAFAQISI, No. 414
AL-HASAN AL-SAFAWI, No. 1399
AL-HASAN AL-SHARJI, No. 1152
AL-HASAN AL-SIRAFI, No. 203
HASAN AL-SIMNANI, No. 704
AL-HASAN AL-SİVASI, No. 613
AL-HASAN AL-TAMIMI AL-ABAHH, No. 33
HASAN AL-TANTAWI, No. 1219
HASAN TUNI, No. 1286
HASAN AL-UJAYMI, No. 1237
AL-HASAN AL-UMAWI, No. 524
HASDAY IBN HASDAY, No. 417
HASSAN IBN HASSAN, No. 172
AL-HASSAR = see, MUHAMMAD AL-HASSAR, No. 532
HATIM, No. 837
HAYDAR AL-HUSAYNABADI, No. 988
HAYDAR AL-JAZARI, No. 1190
HAYDAR AL-SHIRAZI, No. 658
HAYRUDDİN HALİL B. İBRAHİM = see, KHALIL AL-HUSAYNI (HAYRUDDİN HALİL B. İBRAHİM), No. 821
AL-ḤAYSUBI IBN AL-SHĀT, No. 0105
HAYYUN IBN AL-SALT AL-KATIB, No. 234
HIBATALLAH AL-BADI' AL-ASTURLABI, No. 438
HIBATALLAH AL-BALADI AL-BAGHDADI, No. 485
HIBATALLAH AL-HUSAYNI, No. 811
AL-ḤIJĀZI AL-SHĀFII, No. 0106
HILAL AL-HIMSI, No. 84

HISHAM AL-FUWATI, No. 21
HISHAM AL-WAQSHI, No. 406
HIZBALLAH AL-TARRALIBI, No. 477
HIZIR HALİFE AL-TİREVİ = see, KHIDHR KHALIFA AL-TABARI (HIZIR HALİFE AL-TİREVİ), No. 1139
HOCA ABDURRAHMAN EFENDİ = see, AL-BURSAWI (HOCA ABDURRAHMAN EFENDİ), No. 1071
HUBAB AL-FARADI, No. 141
HUBAYSH AL-TIFLISI, No. 567
AL-HUBUBI = see, AL-HASAN AL-HUBUBI, No. 278
HUMAM AL-TABIB, No. 794
HUNAYN IBN ISHAQ AL-IBADI, No. 77
HUSÂM AL-DIN IBN SHAMS AL-DIN AL-KHITAI, No. 0107
HUSAM AL-DIN AL-SALAR, No. 593
HUSAMUDDİN AL-TOKADİ = see, HUSAYN AL-TUQATI (HUSAMUDDİN AL-TOKADİ), No. 917
HUSAYN ABIWARDI, MATHEMATICIAN FROM ABIWARD, No. 0108
AL-HUSAYN AL-ADAMI, No. 85
HUSAYN AL-BAYHAQI AL-KASHIFI, No. 898
HUSAYN EFENDİ MASDARIYAH (MASDARİYECİ-ZADE HÜSEYİN EFENDİ), No. 1419
HUSAYN AL-HATTARI, No. 1256
HUSAYN AL-HURMUZDI, No. 516
HUSAYN HUSNI (HÜSEYİN HUSNİ), No. 1350
HUSAYN IBN ALI IBN SHARAF AL-DIN MASHHADI, No. 0109
AL-HUSAYN IBN BASO AL-ASLAMI, No. 654
AL-HUSAYN IBN JAHHAF, No. 1280
HUSAYN IBN IZZ AL-DIN USHÂQI, No. 0111
HUSAYN IBN MUHAMMAD, No. 1187
AL-ḤUSAYN IBN MUSÂ AL-HARAWI AL-ḤÂSIB, No. 0113
AL-ḤUSAYN IBN ZAYD IBN ALI AL-JAHHÂF, No. 0114
HUSAYN AL-JILÂNI AL-MAZANDARÂNI, No. 0112
HUSAYN AL-KHALKHALI, No. 1063
HUSAYN AL-KHWARIZMI AL-KUBRAWI, No. 805
HUSAYN AL-KILABI, No. 1221
HUSAYN AL-MAHALLI, No. 1355
HUSAYN QIRLANGHIJ-ZADA (KIRLANGIÇ-ZADE), No. 1030
HUSAYN QONAWI (HUSAYN AL KONAVİ), No. 820
HUSAYN QUSA, No. 1168
AL-HUSAYN AL-SHAKKAK, No. 418
HUSAYN AL-TAYBI, No. 697
AL-HUSAYN AL-TUJIBI, No. 375
HUSAYN AL-TUQATI (HUSAMUDDİN AL-TOKADİ), No. 917
AL-HUSAYN AL-WANNI, No. 365
AL-HUSAYN AL-ZAYDI AL-HUSAYNI, No. 916
HÜSEYİN HUSNİ = see, HUSAYN HUSNI (HÜSEYİN HUSNİ), No. 1350

-I-

IBÂDALLÂH, No. 0115
IBN ABD AL-MUNIM, No. 472
IBN ABI JARADA = see, MUHAMMAD IBN ABI JARADA, No. 664
IBN ABI USAYBIA = see, AHMAD IBN ABI USAYBIA, No. 601
IBN ABI ZAYD, No. 1192
IBN AFLAH = see, JABIR IBN AFLAH, No. 448
IBN AL-AJIM, No. 326
IBN ASHIR, No. 1140
IBN AL-BANNA = see, ABD AL-RAHIM IBN AL-BANNA, No. 1056
IBN AL-BANNA = see, AHMAD IBN AL-BANNA, No. 696
IBN BASHKUWAL = see, KHALAF IBN BASHKUWAL, No. 492
IBN AL-BAZYAR = see, MUHAMMAD IBN AL-BAZYAR, No. 54
IBN AL-DAHHAN = see, FAKHR AL-DIN IBN AL-DAHHAN, No. 506
IBN DAIR = see, ABDALLAH IBN SALAH DAIR, No. 1144
IBN AL-DAYA = see, AHMAD IBN AL-DAYA, No. 80
IBN DURAYD = see, MUHAMMAD IBN DURAYD, No. 149
IBN AL-DURAYHIM = see, ALI IBN AL-DURAYHIM, No. 731
IBN FALLUS = see, ISMAIL IBN FALLUS, No. 584
IBN FARIS = see, AHMAD IBN FARIS AL-QAZWINI, No. 280
IBN FIRIGHUN = see, SHA'YA IBN FIRIGHUN, No. 263
IBN AL-FUWATI = see, ABD AL-RAZZAQ IBN AL-FUWATI, No. 676
IBN GHANIM = see, ALI IBN GHANIM AL-MAQDISI, No. 1031
IBN AL-HAIM = see, SHIHAB AL-DIN IBN AL-HAIM, No. 783
IBN AL-HAJIB = see, AHMAD IBN AL-HAJIB, No. 515
IBN AL-HAJIB = see, UTHMAN IBN AL-HAJIB, No. 582
IBN AL-HAJJAJ = see, MUHAMMAD IBN AL-HAJJAJ, No 734
IBN HAMDUN = see, ABU'L-ABBAS IBN HAMDUN, No 44
IBN HAMZA AL-MAGHRIBI = see, ALI IBN HAMZA AL-MAGHRIBI, No. 1051
IBN HANI = see, MUHAMMAD IBN HANI, No. 681
IBN AL-HAWQAL = see, MUHAMMAD IBN AL-HAWQAL AL-NASIBI, No. 214
IBN AL-HAYTHAM = see, AL-HASAN IBN AL-HAYTHAM, No. 328
IBN AL-HAYTHAM = see, MUHAMMAD IBN AL-HAYTHAM, No. 327
IBN HAZM = see, ALI IBN HAZM, No. 374
IBN HIBINTA, No. 55
IBN AL-IBRI = see, ABU 'L-FARAJ IBN AL-IBRI, No. 633
IBN ILYÂS, No. 0121
IBN IRAQ = see, ABU NASR IBN IRAQ, No. 299
IBN ISHAQ IBN KUSUF, No. 64
IBN JADARI, No. 0127
IBN AL-JIAN = see, YAHYA IBN AL-JIAN, No. 930
IBN AL-JUNDI = see, MUHAMMAD IBN AL-JUNDI, No. 1245
IBN AL-KATTANI = see, MUHAMMAD IBN AL-KATTANI AL-ALATI, No. 735
IBN AL-KAYYAL = see, ABD AL-LATIF IBN AL-KAYYAL, No. 1016
IBN KHALDUN =see, ABD AL-RAHMAN IBN KHALDUN, No. 771
IBN KHALLIKAN = see, SHAMS AL-DIN IBN KHALLIKAN, No. 625
IBN AL-KHAMMAR = see, AL-HASAN IBN AL-KHAMMAR, No. 266
IBN AL-KHASHSHAB = see, ABDALLAH IBN AL-KHASHSHAB, No. 482
IBN AL-KHASIB = see, ABU BAKR AL-HASAN IBN AL-KHASIB, No. 99
IBN AL-KHAWWAM = see, IMAD AL-DIN IBN AL-KHAWWAM AL-BAGHDADI, No. 657
IBN KHURDADHBIH = see, UBAYDALLAH IBN KHURDADHBIH, No. 120
IBN MADAN = see, ALI IBN MADAN, No. 187
IBN MAHALLI AL-MAWṢILİ, No. 0143
IBN MAHFUZ = see, JAMAL AL-DIN IBN MAHFUZ AL-BAGHDADI, No. 609
IBN AL-MAJDI = see, SHIHAB AL-DIN IBN AL-MAJDI, No. 815
IBN MAJID = see, AHMAD IBN MAJID, No. 904
IBN MAMI = see, ALI IBN MAMI AL-HANAFI, No. 1170
IBN MUN'IM, No. 556
IBN MUQADDAM, No. 0241
IBN AL-NABDI, No. 368
IBN AL-NADIM = see, MUHAMMAD IBN AL-NADIM, No 272
IBN NAWBAKHT = see, ABDALLAH IBN NAWBAKHT, No. 52
IBN NAWBAKHT = see, AL-FADL IBN NAWBAKHT, No. 17
IBN NAWBAKHT = see, AL-HASAN IBN NAWBAKHT, No. 51
IBN QADI SHUHBA = see, MUHAMMAD IBN QADI SHUHBA, No. 852
IBN AL-QALAI = see- MUHAMMAD IBN AL-QALAI, No. 1057
IBN AL-QASIM AL-BAGHDADI, No. 451

IBN AL-QASS = see, AHMAD IBN AL-QASS AL-TABARI, No. 175
IBN AL-QIFTI = see, JAMAL AL-DIN IBN AL-QIFTI, No. 579
IBN AL-QUFF = see, AMIN AL-DAWLA IBN AL-QUFF AL-KARAKI, No. 628
IBN AL-QUNFUDH = see, AHMAD IBN AL-QUNFUDH AL-QUSANTINI, No. 780
IBN QUTAYBA = see, ABDALLAH IBN QUTAYBA AL-DINAWARI, No. 94
IBN AL-QUTIYA = see, ABD AL-MALIK IBN AL-QUTIYA, No. 322
IBN QUTLUBUGHA = see, ŻAYN AL-DIN IBN QUTLUBUGHA, No. 846
IBN AL-A'RABI = see, ALI IBN AL-A'RABI AL-SHAYBANI, No. 19
IBN RAHIWAYH AL-ARRAJANI, No. 57
IBN AL-RAQQAM = see, MUHAMMAD IBN AL-RAQQAM AL-AWSI AL-ANDALUSI, No. 670
IBN RAWH, No. 241
IBN RUSHD = see, MUHAMMAD IBN RUSHD, No. 512
IBN RUSHD = see, MUHAMMAD IBN RUSHD, No. 675
IBN RUSTA = see, AHMAD IBN RUSTA, No. 112
IBN SABIN = see, ABD AL-HAQQ IBN SABIN, No. 501
IBN AL-SAMH = see, ASBAGH IBN AL-SAMH, No. 310
IBN AL-SARRAJ = see, MUHAMMAD IBN AL-SARRAJ, No. 143
IBN AL-SARRAJ = see, SHIHAB AL-DIN IBN AL-SARRAJ AL-HAMAWI, No. 732
IBN SARTAQ = see, MUHAMMAD IBN SARTAQ AL-WARARQAYNI AL-MARAGHI, No. 612
IBN SHAR'A, No. 0269
IBN SHAKIR = see, MUHAMMAD IBN SHAKIR AL-KUTUBI, No. 740
IBN AL-SHAMMA = see, SHAMS AL-DIN IBN AL-SHAMMA, No. 830
IBN AL-SHATIR = see, ALA' AL-DIN IBN AL-SHATIR, No. 750
IBN SIMAWAIH, No. 110
IBN SINA = see, ABU ALI IBN SINA, No. 317
IBN AL-SIKKIT = see, YA'QUB IBN AL-SIKKIT, No. 62
IBN SUDUN = see, SAYYIDI IBN SUDUN, No. 929
IBN TALHA = see, MUHAMMAD IBN TALHA, No. 586
IBN TARIQ = see, YA'QUB IBN TARIQ, No. 11
IBN AL-TARRAH = see, AL-HASAN IBN AL-TARRAH, No. 569
IBN THABAT = AHMAD IBN THABAT, No. 602
IBN TUFAYL = see, MUHAMMAD IBN TUFAYL, No. 494
IBN TULUN = see, MUHAMMAD IBN TULUN AL-DIMASHQI, No. 993
IBN TUMART = see, MUHAMMAD IBN TUMART AL-ANDALUSI, No. 500
IBN AL-TURKUMANI = see, ALA' AL-DIN IBN AL-TURKUMANI, No. 716
IBN AL-UKHUWWA = see, MUHAMMAD IBN AL-UKHUWWA, No. 679
IBN AL-WAQSHI AL-TULAYTALI, No. 422
IBN WASIL = see, JAMAL AL-DIN IBN WASIL, No. 648
IBN YALB, No. 1136
IBN AL-YASAMIN = see, MUHAMMAD IBN AL-YASAMIN, No. 521
IBN YASIN = see, MUSA IBN YASIN, No. 166
IBN YUNIS = see, ISA IBN YUNIS, No. 66
IBN YUNIS = see, KAMAL AL-DIN IBN YUNIS, No. 576
IBN ZAGHBIB = see, MUHAMMAD IBN ZAGHBIB, No. 1343
IBN ZAKARIYA AL-AWSI, No. 792
IBN ZAKARIYYA AL-GHARNATI, No. 793
IBN ZUNBUL = see, NUR AL-DIN IBN ZUNBUL AL-MAHALLI, No. 989
IBN ZURA = see, ISA IBN ZURA, No. 282
IBN ZURAYQ = see, MUHAMMAD IBN ZURAYQ AL-KHAYRI, No. 795
IBRAHIM, No. 179
IBRAHIM AL-ALAI, No. 1416
IBRAHIM AL-ALFI, No. 861
IBRAHIM AL-ASBAHI, No. 632
IBRAHIM AL-ASHRAFI, No. 1013
IBRAHIM AL-BAJALI (AL-BACALI), No. 925
IBRAHIM AL-BAWSI, No. 561
IBRAHIM AL-BIQAI, No. 853
IBRÂHIM EFENDI, No. 0116
IBRAHIM AL-FAHMI, No. 361
IBRÂHIM AL-FARGHÂNI, No. 0117
IBRAHIM AL-FAZARI, No. 6
IBRAHIM AL-HALABI RAGHIB PASHA KHWAJASI (RAGIB PAŞA HOCASI), No. 1349
IBRAHIM AL-HALABI, No. 959
IBRAHIM AL-HAQQI ERZURUMI (İBRAHİM HAKKI AL-ERZURUMİ), No. 1332
IBRAHIM HUSAYN AL-SHABRUDI, No. 1147
IBRAHIM HUSAYN AL-SHABRUDI, No. 1154
IBRAHIM IBN AL-HASSAB, No. 126
IBRAHIM IBN HILAL, No. 251
IBRAHIM IBN MAMDUD, No. 683
IBRAHIM IBN MUHAMMAD (TEZKİRECİ KÖSE İBRAHİM), No. 1230
IBRÂHIM IBN MUHAMMAD AL-WAHDATI, No. 0119
IBRAHIM IBN AL-SABBAH, No. 69
IBRAHIM IBN AL-SALT, No. 56
IBRAHIM IBN SINAN, No. 174
IBRAHIM AL-ISTAKHRI, No. 213
IBRAHIM AL-JA'BARI, No. 690
IBRAHIM AL-JAHHAF, No. 1124
IBRAHIM AL-JANADI, No. 968
IBRAHIM AL-KAWAKIBI, No. 1045
IBRAHIM AL-MAGHRIBI AL-ANDALUSI, No. 1032
IBRAHIM MUTAFARRIQA (MÜTEFERRİKA), No. 1328
IBRAHIM AL-NAWAWI, No. 838
IBRAHIM AL-NAZZAM, No. 60
IBRAHIM AL-QARAMANI AL-AMIDI, No. 1209
IBRAHIM AL-SHIRAZI, No. 1142
IBRAHIM AL-TABRIZI, No. 638
IBRAHIM AL-TILIMSANI, No. 637
IBRAHIM AL-ZAJJAJ, No. 131
IBRAHIM AL-ZAMZAMI AL-KHALWATI, No. 1373
IBRAHIM AL-ZARQALI, No. 402
AL-IDRISI = see, MUHAMMAD AL-IDRISI, No. 1084
AL-IDRISI = see, MUHAMMAD AL-IDRISI, No. 470
IKHWAN AL-SAFA, No. 226
ILYAS AL-SARUKHANI AL-AQHISARI (AL-AKHİSARİ), No. 975
IMAD AL-BUKHARI, No. 939
IMAD AL-DIN IBN AL-KHAWWAM AL-BAGHDADI, No. 657
IMAD AL-DIN IBN SHARAF, No. 785
IMAD AL-DIN AL-KASHI, No. 698
IMAD AL-DIN AL-LAHURI, No. 1179
IMAD AL-DIN YAHYA, No. 862
INDARMAN HISARI, No. 1402
IRANSHAH AL-NAYSABURI, No. 1024
ISÂ IBN AHMAD IBN YUSUF, No. 0122
ISA AL-MASIHI, No. 285(180)
ISA IBN YUNIS, No. 66
ISA IBN ZURA, No. 282
ISA AL-RAQQI AL-TIFLISI, No. 206
ISA AL-SHAMGHADI, No. 1122
ISA AL-WASITI, No. 382
AL-ISFARAINI = see, ABU'L-ALĀ MUHAMMAD IBN AHMAD AL-ISFARAINI, No. 0170
ISMATALLAH AL-SAHARANFURI, No. 1171
AL-ISTAKHRI, No. 163
ISHAQ EFENDI (BAŞ HOCA İSHAK EFENDİ), No. 1407
ISHAQ IBN HUNAYN AL-IBADI, No. 114
ISHAQ IBN KARNIB, No. 123
ISHAQ IBN YUNIS, No. 389
ISHÂQ MUNAJJIM IBN YUSUF AL-ṬABIB, No. 0125
ISHAQ AL-SARDAFI, No. 411
ISHAQ AL-SHAYBANI, No. 28
ISMAIL AMIDI, No. 1267
ISMAIL FAHIM HAQQI (İSMAİL FEHİM), No. 1335
ISMAIL GALANBAWI (GELENBEVİ), No. 1390
ISMAIL AL-HAMAWI, No. 779

ISMAIL IBN AMIR, No. 1302
ISMAIL IBN FALLUS, No. 584
ISMAIL AL-JAZARI, No. 563
ISMAIL KHATUNABADI, No. 1240
ISMAIL IBN LUTFALLÂH BÂKHARZI, No. 0123
ISMAIL AL-MUHTASIB, No. 0124
ISMAIL AL-NAJRANI, No. 773
ISMAIL AL-QURTUBI, No. 404
ISMAIL AL-SHINAZI, No. 1123
IZZ AL-DIN AHMAD IBN MUHAMMAD AL-BAGHDÂDI, No. 044
IZZ AL-DIN AL-HUSAYNI, No. 0126
IZZ AL-DIN AL-WAFAI, No. 842
IZZ AL-DIN AL-ZANJANI, No. 589
İBRAHİM HAKKI AL-ERZURUMİ = see, IBRAHIM AL-HAQQI ERZURUMI (İBRAHİM HAKKI AL-ERZURUMİ), No. 1332
ISHAK HOCASI = see, AHMAD EFENDİ BRUSI (İSHAK HOCASI), No. 1272
İSMAİL FEHİM = see, ISMAIL FAHIM HAQQI (İSMAİL FEHİM), No. 1335

-J-

AL-JABARTI = see, ABD AL-RAHMAN AL-JABARTI, No. 1381
AL-JABARTI = see, HASAN AL-JABARTI, No. 1367
JABIR AL-HARRANI, No. 136
JABIR IBN AFLAH, No. 448
JABIR IBN HAYYAN, No. 9
JABIR IBN IBRAHIM AL-SABI', No. 252
JA'FAR ASTURLÂBI, No. 0128
JA'FAR AL- HADRAMI, No. 304
JA'FAR IBN UMAR ASTARÂBÂDİ, No. 0129
JA'FAR IBN AL-MUQTAFI, No. 222
JA'FAR AL-MAKKI, No. 240
JA' FAR AL-QATTA', No. 525
JA'FAR AL-SADIQ, No. 5
JA'FAR MAWAZAJI, No. 235
JAGPAT RÂY, No. 0130
AL-JAGHMINI = see, MAHMUD AL-JAGHMINI, No. 547
AL-JAHIZ = see, AMR AL-JAHIZ, No. 76
JALÂL AL-DIN MUHAMMAD IBN ALI AL-JUWAYNİ, No. 0176
JALAL AL-DIN AL-SUYUTI, No. 896
JAMAL AL-DIN AL-DAWWANI, No. 894
JAMAL AL-DIN AL-DIMASHQI, No. 786
JAMAL AL-DIN AL-HASHIMI, No. 1037
JAMAL AL-DIN IBN AL-MAYLI, No. 528
JAMAL AL-DIN IBN AL-QIFTI, No. 579
JAMAL AL-DIN IBN MAHFUZ AL-BAGHDADI, No. 609
JAMAL AL-DIN IBN WASIL, No. 648
JAMAL AL-DIN AL-MARIDINI, No. 775
JAMAL AL-DIN AL-SUGHDI AL-TURKISTANI, No. 718
JAMAL AL-DIN AL-ZAYDI AL-BUKHARI, No. 619
JAMI = see, ABD AL-RAHMAN JAMI, No. 882
JAMSHID AL-KASHI, No. 802
AL-JANADI = see, IBRAHIM AL-JANADI, No. 968
JAWÂHAR MÂL, No. 0132
AL-JAWBARI = see, ABD AL-RAHMAN AL-JAWBARI, No. 617
AL-JAWNPURI = see, MAHMUD AL-JAWNPURI, No. 1120
AL-JAYHANI = see, AHMAD AL-JAYHANI, No. 201
AL-JAZARI = see, ISMAIL AL-JAZARI, No. 563
AL-JAZULI = see, ABD AL-RAHMAN AL-SUSI AL-JAZULI, No. 1083
AL-JAZULI = see, ALI AL-JAZULI AL-RASMUKI, No. 1103
AL-JAZULI = see, SHAMS AL-DIN AL-JAZULI, No. 737
JIRJIS USQUF AL-ARAB, No. 4
AL-JUNÂBÂDI = see, MUHAMMAD AFDAL IBN MASUD AL-HUSAYNI AL-JUNÂBÂDI, No. 0168
AL-JUWAYNI = see, JALÂL AL-DIN MUHAMMAD IBN ALI AL-JUWAYNI, No. 0176
AL-JUZJANI = see, AHMAD AL-JUZJANI, No. 700

-K-

KA'B AL-AMIL, No. 510
KADI-ZADE = see, QAZI-ZADA AL-RUMI (KADI-ZADE), No. 808
KÂFI QAINI, No. 0133
AL-KAFİYECİ = see, MUHAMMAD AL-KAFIYAJI (AL-KAFİYECİ), No. 863
KAMÂL AL-TUSTARI AL-ŞUFI, No. 0134
KAMAL AL-DIN AL-FARISI, No. 674
KAMAL AL-DIN AL-HAKKAK, No. 662
KAMAL AL-DIN AL-MAYBUDHI, No. 839
KAMAL AL-DIN AL-TURKUMANI, No. 738
KAMAL AL-DIN IBN YUNIS, No. 576
KAMAL PASHA ZADA, No. 953
KARÂBISI = see, ABD AL-RAHIM IBN SHEIKH MUHAMMAD RIDÂ KARÂBISI, No. 024
AL-KARABISI = see, AHMAD AL-KARABISI, No. 224
AL-KARAJI = see, MUHAMMAD AL-KARAJI, No. 309
AL-KARAKI = see, ABU BAKR AL-KARAKI, No. 725
KARIM BAKHSH, No. 1397
AL-KARMANI = see, AMR AL-KARMANI, No. 377
AL-KASHGHARI = see, MAHMUD AL-KASHGHARI, No. 395
AL-KASHI = see, IMAD AL-DIN AL-KASHI, No. 698
AL-KASHI = see, JAMSHID AL-KASHI, No. 802
AL-KASHI = see, MUIN AL-DIN AL-KASHI, No. 835
AL-KASHIFI = see, HUSAYN AL-BAYHAQI AL-KASHIFI, No. 898
AL-KASTAMONİ = see, SHA'BAN AL-QASTAMUNI (AL-KASTAMONİ), No. 987
AL-KATIBI = see, NAJM AL-DIN AL-KATIBI AL-QAZWINI, No. 616
KATİP ÇELEBİ = see, MUSTAFA HAJJI KHALIFA (KATİP ÇELEBİ), No. 1145
KAVALALIZADE = see, ABD AL-WAHHAB KAWALALI ZADA(ABDULVAHAB KAVALALIZADE), No. 1111
AL-KAWAKIBI = see, MUHAMMAD AL-KAWAKIBI, No. 1101
AL-KAWASHI = see, MUHAMMAD AL-KAWASHI, No. 614
AL-KAWM = see, SHIHAB AL-DIN AL-KAWM AL-RISHI, No. 800
KAYKHUSRAW AL-SHIRAZI, No. 450
AL-KHABRI = see, ABDALLAH AL-KHABRI, No. 392
AL-KHAFAJI = see, NUR AL-DIN AL-KHAFAJI, No. 1389
AL-KHAFRI = see, MUHAMMAD AL-KHAFRI, No. 936
KHALAF IBN BASHKUWAL, No. 492
KHALAF IBN HAYYAN, No. 316
KHALID AL-ADIB, No. 338
KHALID AL-MARWARRUDHI, No. 42
KHALIL FAID EFENDI (CABİ-ZADE HALİL FAİZ), No. 1314
KHALİL AL-HUSAYNI (HAYRUDDİN HALİL B. İBRAHİM), No. 821
KHALIL AL-JUNDI, No. 728
AL-KHALILI = see, SHAMS AL-DIN AL-KHALILI, No. 764
AL-KHALILI = see, SHARAF AL-DIN AL- KHALILI, No. 797
AL-KHALKHALI = see, ALI AL-KHALKHALI, No. 1153
AL-KHALKHALI = see, HUSAYN AL-KHALKHALI, No. 1063
KHÂN MUHAMMAD IBN ABD AL-GHANİ QURAYSHI GUJARATI, No. 0135
AL-KHAQANI AL-MUNAJJIM, No. 330
AL-KHARAQI = see, ABD AL-JABBAR AL-KHARAQI, No. 469
AL-KHARAQI = see, MUHAMMAD AL-KHARAQI, No. 435
AL-KHATIB AL-BAGHDADI = see, AHMAD AL-KHATIB AL-BAGHDADI, No. 386
AL-KHATIRI = see, AHMAD AL-KHATIRI, No. 538
KHATTABI AL-HUSAYNI, No. 900
AL-KHATUNABADI = see, AHMAD AL-KHATUNABADI, No. 1271
KHATUNABADI = see, ISMAIL KHATUNABADI, No. 1240
KHÂWARI, No. 0136
AL-KHAYYÂT = see, MAHMUD AL-KHAYYÂT, No. 0145

AL-KHAZIN = see, ABU JA'FAR AL-KHAZIN, No. 194
AL-KHAZINI = see, ABD AL-RAHMAN AL-KHAZINI, No. 476
KHAZINI = see, MUHAMMAD KHAZINI, No. 1141
KHIDHR KHALIFA AL-TABARI(HIZIR HALİFE AL-TİREVİ), No. 1139
KHIDR AL-QABBANI, No. 1214
AL-KHIDRI, No. 0137
KHIDRSHAH EFENDI, AL-MANTAŞAVI, No. 817
AL-KIRMANI = see, AL-HASAN AL-KIRMANI, No. 319
KHITAI, No. 0138
KHUDÂYÂR, No. 0139
KHUJANDI = see, ABD AL-JABBÂR KHUJANDI, No. 07
KHURZAD IBN DARSHAD, No. 73
AL-KHUZAI = see, MUHAMMAD AL-KHUZAI, No. 604
KHWAJA BAHADUR HUSAYN KHAN, No. 1264
AL-KHWÂNAKÎ = see, MUHAMMAD SHAMS AL-DIN IBN MUHAMMAD AL-KHWÂNAKI, No. 0236
AL-KHWÂNAKÎ = see, RAMADAN AL-SAFATI AL-KHWANAKI, No. 1323
KHWANSARI = see, MALIK MAHMUD KHWANSARI, No. 1189
KHWANSARI = see, SAYYID ALI KHWANSARI, No. 1306
AL-KHWARIZMI = see, MUHAMMAD AL-KHWARIZMI, No. 41
AL-KINDI = see, YA'QUB AL-KINDI, No. 79
AL-KILAI = see, MUHAMMAD AL-KILAI, No. 98
KIRLANGIÇ-ZADE = see, HUSAYN QIRLANGHIJ-ZADA (KIRLANGIÇ-ZADE), No. 1030
AL-KIRMANI = see, ALA AL-KIRMANI, No. 329
AL-KİLARCİ = see, YUSUF AL-KILARJI (AL-KİLARCİ), No. 1341
KOJA DAWUD RIYADI, No. 1098
AL-KONAVİ = see, MUHAMMAD AL-QONAWI (AL-KONAVİ), No. 933
AL-KUHI = see, WAYJAN AL-KUHI, No. 277
AL-KUNJUDI, No. 1064
KURU-ZADE ALİ = see, MAWLANA ALI QURI- ZADA (KURU-ZADE ALİ), No. 1378
KUSHYAR IBN LABBAN, No. 308
AL-KUTUBI = see, MUHAMMAD AL-KUTUBI, No. 1222

-L-

AL-LADHIQI = see, MUHAMMAD IBN ABD AL-MAHMUD AL-LADHIQI, No. 1247
AL-LADHIQI = see, MUHAMMAD AL-LADHIQI, No. 926
AL-LADHIQI = see, SHAMS AL-DIN AL-LADHIQI, No. 1052
LAHIJI = see, QUTB AL-DIN LAHIJI, No. 1270
AL-LAHURI = see, AMIN AL-DIN AL-SIDDIQI AL-LAHURI, No. 1372
AL-LÂMII, No. 0140
AL-LARI = see, MUSLIH AL-DIN AL-LARI AL-ANSARI, No. 994
AL-LARI = see, QUTB AL-DIN AL-LARI, No. 1109
LATIF IBN BABAKALAN AL-SAMARKANDI, No. 1198
LUBNA, No. 208
LUTFALLAH AL-HUSAYNI, No. 1284
LUTFALLAH AL-LAHURI, No. 1178
LUTFALLAH AL-TUQATI (MOLLA LUTFİ), No. 869
LUṬFALLÂH SHIRÂZI, No. 0142

-M-

MAHAD AL-CHUKHI, No. 1364
AL-MAHANI = see, MUHAMMAD AL-MAHANI, No 82
AL-MAHDI AHMAD IBN YAHYA, No. 814
MAHDI-MUHAMMAD AL-THUGHRATI, No. 1375
MAHFUZ AL-HADRAMI, No. 961
MAHMUD AL-AWFI AL-HIJAZI, No. 1121
MAHMUD EFENDI, No. 1344
MAHMUD AL-FARISI, No. 957
MAHMUD IBN ABD AL-RAHMÂN AL-AWFI, No. 0144
MAHMUD IBN AL-WUSUDI, No. 0147
MAHMUD AL-ISFAHANI, No. 439
MAHMUD AL-JAGHMINI, No. 547
MAHMUD AL-JAWNPURI, No. 1120
MAHMUD AL-KASHGHARI, No. 395
MAHMUD AL-KHAYYÂT, No. 0145
MAHMUD AL-MURSHIDI, No. 778
MAHMUD NAQQASH AL-SHABKAH, No. 1033
MAHMUD QUṬB AL-MIHNI, No. 0146
MAHMUD AL-SHAYBANI, No. 573
MAHMUD-SHAH KHALJI, No. 844
MAHMUD AL-WALISHTANI, No. 832
AL-MAJÂRI, No. 0149
MAJNUN, No. 0150
AL-MAJRITI = see, MASLAMA AL-MAJRITI, No. 281
AL-MAJRITI = see, MUHAMMAD AL-MAJRITI, No. 354
MAKHUL AL-NASAFI, No. 144
MALIK MAHMUD KHWANSARI, No. 1189
MALIK MUHAMMAD ISFAHANI, No. 1021
AL-MA'MUN = see, ABDALLAH AL-MA'MUN, No. 32
AL-MA'MURI = see, MUHAMMAD AL-MA'MURI AL-BAYHAQI, No. 427
MANNUN LAL FALSAFI, No. 1409
MANṢUR, No. 0151
MANSUR AL-DAMAGHANI, No. 454
MANSUR AL-KASHI, No. 836
MANSUR AL-KHUZAI, No. 45
MANSUR AL-YAMANI, No. 627
MANSUR AL-ZUWAWI, No. 730
AL-MANUFI = see, SHAMS AL-DIN AL-MANUFI, No. 1012
AL-MAQQARI = see, AHMAD AL-MAQQARI, No. 1099
AL-MAQRIZI = see, AHMAD AL-MAQRIZI, No. 810
AL-MARRAKUSHI = see, AL-HASAN AL-MARRAKUSHI, No. 592
MARWAN AL-ARQI, No. 383
MASHALLAH, No. 18
AL-MASIHI = see, ISA AL-MASIHI, No. 285
MASLAMA AL-MAJRITI, No. 281
MASUD AL-MASHHADI, No. 819
MASUD AL-SHIRWANI, No. 890
AL-MASUDI = see, ALI AL-MASUDI, No. 186
AL-MASUDI = see, SHARAF AL-DIN AL-MASUDI, No. 666
MATTA IBN YUNIS, No. 162
MAWLANA ALI QURI- ZADA (KURU-ZADE ALİ), No. 1378
MAZHAR AL-DIN AL-QARI, No. 1010
AL-MAZRUQI = see, AHMAD AL-MAZRUQI, No. 307
MEDNI MAL NARAYAN, No. 1236
MEHMED ÇELEBİ = see, MUHAMMAD CHELEBI, No. 1104
MEHMED MÜNECCİMEK=see, MUHAMMAD MUNAJJIMAK, No. 1354
MEHMED SELİM HOCA= see, MUHAMMAD SALIM IBN HUSAYN, No. 1329
MIKHALIJI = see, MUHAMMAD MIKHALIJI, No. 1352
AL-MIKNASI = see, SHIHAB AL-DIN AL-MIKNASI AL-ZANATI, No. 1085
MIR ABU TURÂB IBN AHMAD, No. 0157
MIR ABU'L-QÂSIM, No. 0156
MIR ḤUSAYNI, No. 0155
MIR HUSAYN MUBADI, No. 1287
MIR HUSAYN YAZDI, No. 901
MIR MUHAMMAD HASHIM AL-ALAWI AL-HUSAYNI, No. 1114
MIR MUHAMMAD HUSAYN ISFAHANI LANDANI, No. 1412
MIRIM CHELEBI (MİRİM ÇELEBİ), No. 940
MIRQÂRI KAWKABI GILÂNI, No. 0161
MIRZA BADI-DIWAN, No. 1394
MIRZA KHAYRALLAH AL-LAHURI, No. 1181
MIRZA MUHAMMAD RADI SHAFII, No. 1184
MIRZA MUHAMMAD-BEG, No. 1304
MIRZA QAZI ARDAKANI YAZDI, No. 1059
MIRZAJAN AL-SHIRAZI, No. 1003
AL-MISSISI = see, ALI AL-MISSISI, No. 228
AL-MIZZI = see, ABD AL-RAHIM AL-MIZZI, No. 665
AL-MIZZI = see, SHAMS AL-DIN AL-MIZZI, No 715

MIRİM ÇELEBİ = see. MIRIM CHELEBI (MİRİM ÇELEBİ), No. 940
MOLLA ÇELEBİ AL-AMİDİ = see, MUHAMMAD MULLA CHELEBI AL-AMIDI (MOLLA ÇELEBI AL-AMİDİ), No. 1143
MOLLA LUTFİ = see, LUTFALLAH AL-TUQATI (MOLLA LUTFİ), No. 869
MOSES MAIMONIDES, No. 534
MUAMMAR IBN ABBAD, No. 36
MUARRIJ IBN UMAR, No. 16
MUAYYAD AL-DIN AL-URDI, No. 629
MUAYYAD-ZADA = see, ABD AL-RAHMAN MUAYYAD-ZADA (MÜEYYED-ZADE), No. 935
MUAYYAD IBN ABD AL-RAHİM IBN AHMAD IBN MUHAMMAD AL-BAGHDÂDI, No. 0162
MUBÂRAK AL-AWAZI, No. 0163
MUBARAK-SHAH, No. 753
AL-MUBASHSHIR AL-AMIRI, No. 364
MUBASHSHIR AL-RAZI, No. 505
MUHAB AL-ADAWI AL-FARADI, No. 190
MUHABB AL-DIN AL-UKBARI, No. 545
MUHADHDHAB AL-DIN AL-DAKHWAR, No. 566
MUHADHDHAB AL-DIN IBN AL-BURHAN, No. 498
MUHAMMAD AL-ABADI, No. 549
MUHAMMAD ĀBID IBN MUHAMMAD DIYÂ, No. 0166
MUHAMMAD ÂBIDIN IBN MUHAMMAD ṬĀHIR AL-ḤUSAYNI, No. 0167
MUHAMMAD ABID DIHLAWI, No. 1180
MUHAMMAD AL-ABILI, No. 745
MUHAMMAD AL-ADFINI AL-FARADI, No. 1229
MUHAMMAD AL-ADHRI, No. 246
MUHAMMAD AFDAL AL-DAWLA, No. 491
MUHAMMAD AFDAL IBN MASUD AL-ḤUSAYNI AL-JUNĀBĀDI, No. 0168
MUHAMMAD AGHA AQBUNARI (AL-AKPINARİ), No. 981
MUHAMMAD AL-AHSAI, No. 1368
MUHAMMAD AL-AKFANI, No. 703
MUHAMMAD AL-AKHSASI, No. 1055
MUHAMMAD AL-ALAWANI, No. 1094
MUHAMMAD ALI BIRJANDI, No. 1321
MUHAMMAD ALI HAKIM, No. 1388
MUHAMMAD ALI HAZIN JILANI, No. 1339
MUHAMMAD ALI RIYADAI MUHANDIS, No. 1273
MUHAMMAD ALI AL-ḤUSAYNI, No. 0175
MUHAMMAD ALI IBN MUHAMMAD QÂSIM, No. 0179
MUHAMMAD AMÎN IBN ABDALLÂH, No. 0182
MUHAMMAD AMIN AL-ALAWI, No. 1233
MUHAMMAD AMIN AL-ISKANDARI, No. 1303
MUHAMMAD AMIN AL-MU'MINABADI, No. 1199
MUHAMMAD AMIN HIJAZI QUMMI, No. 1068
MUHAMMAD AMIN SHIRWANI, No. 1090
MUHAMMAD AL-AMRÎ AL-MILÂNI, No. 0184
MUHAMMAD AL-AMULI, No. 1197
MUHAMMAD AL-AMULI, No. 719
MUHAMMAD AL-ANSARI, No. 462
MUHAMMAD AL-ARABI, No. 0185
MUHAMMAD AL-ASHIK CHELEBI (AŞIK ÇELEBİ), No. 1039
MUHAMMAD AL-ASHMAWI, No. 1391
MUHAMMAD ASHRAF AL-TABATABAI, No. 1191
MUHAMMAD ASHRAF YAZDI, No. 1081
MUHAMMAD AṬIF IBN ABD AL-RAHMAN AL-QABUJÂQI, No. 0188
MUHAMMAD AL-ATTAR AL-ISIRDI, No. 548
MUHAMMAD AL-ATTAR, No. 385
MUHAMMAD AL-AZDI AL-FARADI, No. 199
MUHAMMAD BAKHRAQ, No. 850
MUHAMMAD BAKIR ASTARABADI DAMAD, No. 1093
MUHAMMAD BAKRAN, No. 551
MUHAMMAD BAKRANI, No. 1276
MUHAMMAD AL-BAKRI, No. 570
MUHAMMAD AL-BALANSI, No. 587
MUHAMMAD BANNANI, No. 1361
MUHAMMAD BAQIR AL-MAJLISI, No. 1213
MUHAMMAD BAQIR AL-TABIB, No. 1311
MUHAMMAD BAQIR AL-YAZDI, No. 1080
MUHAMMAD BARAKAT, No. 1401
MUHAMMAD BARARI UMMI QAQSHAL, No. 1185
MUHAMMAD AL-BARMAKI, No. 63
MUHAMMAD BASTULUS ASTURLABI, No. 152
MUHAMMAD AL-BATTANI, No. 137
MUHAMMAD AL-BILBAYSI IBN AL-ATTAR, No. 927
MUHAMMAD AL-BOSNAWI, No. 1100
MUHAMMAD AL-BURSAWI (EFE-ZADE), No. 919
MUHAMMAD CHELEBI (MEHMED ÇELEBİ), No. 1104
MUHAMMAD CHELEBI AL-SHURAYBI, No. 1370
MUHAMMAD AL-DAJI AL-GHAZNAWI, No. 594
MUHAMMAD DAHDÂR, No. 0190
MUHAMMAD AL-DARENDEVI, No. 1315
MUHAMMAD AL-DAWWANI, No. 378
MUHAMMAD AL-DAYLAMI, No. 962
MUHAMMAD AL-DIHLAWI, No. 707
MUHAMMAD AL-DIMYATI, No. 1205
MUHAMMAD FADIL AL-SAMARKANDI, No. 1019
MUHAMMAD FADIL IBN ABD AL-SHAKUR, No. 1133
MUHAMMAD AL-FAHRI, No. 552
MUHAMMAD AL-FĀRĀBI, No. 180
MUHAMMAD AL-FARAQI, No. 1400
MUHAMMAD AL-FARGHALI, No. 1406
MUHAMMAD AL-FARID, No. 408
MUHAMMAD AL FARIQI AL-MUHASIB, No. 603
MUHAMMAD AL-FAWANISI, No. 1028
MUHAMMAD AL-FAWANISI, No. 446
MUHAMMAD AL-FAYTURI, No. 1177
MUHAMMAD AL-FAZARI, No. 15
MUHAMMAD AL-GHAFIQI, No. 313
MUHAMMAD AL-GHAFIQI, No. 503
MUHAMMAD AL-GHAZAWI, No. 864
MUHAMMAD AL-GHAZZALI, No. 415
MUHAMMAD AL-GHAZZI, No. 998
MUHAMMAD AL-GHUMRI, No. 1253
MUHAMMAD AL-HABBAK, No. 831
MUHAMMAD ḤABIBALLÂH QANDAHÂRI, No. 0192
MUHAMMAD AL-HADI TAJ AL-SAIDI, No. 985
MUHAMMAD HADI IBN AGHÂ IBN NAQI LAKHNAWI, No. 0158
MUHAMMAD AL-HAFAFI, No. 0228
MUHAMMAD AL-HAKIM AL-TIRMIDHI, No. 148
MUHAMMAD AL-HALABI, No. 651
MUHAMMAD AL-HAMDANI, No. 533
MUHAMMAD AL-HAMIDI, No. 1336
MUHAMMAD AL-HARITHI, No. 520
MUHAMMAD HASAN KHAN, No. 1255
MUHAMMAD AL-HASHIMI, No. 287
MUHAMMAD AL-HASIB, No. 754
MUHAMMAD AL-HASSAR, No. 532
MUHAMMAD HAYDAR, No. 1158
MUHAMMAD AL-HAZIMI AL-SAIDI, No. 410
MUHAMMAD AL-HIMADHI, No. 652
MUHAMMAD AL-HINDI, No. 463
MUHAMMAD ḤUSAYN IBN MUHAMMAD BÂQI, No. 0231
MUHAMMAD ḤUSAYN IBN QÂSIM HARAWI, No. 0230
MUHAMMAD HUSAYN AL-BIJAPURI, No. 1258
MUHAMMAD ḤUSAYN ṢABURI TABRİZI, No. 0232
MUHAMMAD ḤUSAYNI, No. 0234
MUHAMMAD AL-ḤUSAYNI "SAYYID MUNAJJIM", No. 0233
MUHAMMAD AL-HUNAYDI, No. 1087
MUHAMMAD AL-HUSAYNI, No. 1135
MUHAMMAD AL-HUSAYNI, No. 841
MUHAMMAD AL-IDRISI, No. 1084
MUHAMMAD AL-IDRISI, No. 470
MUHAMMAD IBN ABD AL-BAQI AL-BAGHDADI, No. 421
MUHAMMAD IBN ABD AL-JALÎL, No. 0164
MUHAMMAD IBN ABD AL-MAHMUD AL-LADHIQI, No 1247
MUHAMMAD IBN ABD AL-WÂHID TABRİZI, No. 0165
MUHAMMAD IBN ABDALLAH YAZDI, No. 1082

MUHAMMAD IBN AL-ABBAR, No. 590
MUHAMMAD IBN ABI ABBAD, No. 147
MUHAMMAD IBN ABI JARADA, No. 664
MUHAMMAD IBN ABĪ BAKR IBN AL-MUṢṬAFĀ AL-QĀDIRI AL-SUKUFĪ, No. 0189
MUHAMMAD IBN AHMAD ABU'L-UQUL, No. 653
MUHAMMAD IBN AHMAD AL-DAKHRI, No. 0169
MUHAMMAD IBN AHMAD AL-JA'FARI, No. 0171
MUHAMMAD IBN AKTHAM, No. 90
MUHAMMAD IBN ALĪ AL-KABĀDĪ, No. 0177
MUHAMMAD IBN ALĪ AL-MUNAJJIM SHAMS, No. 0178
MUHAMMAD IBN ALĪ AL-MUSAWĪ, No. 0180
MUHAMMAD IBN ALĪ, No. 0173
MUHAMMAD IBN AL -ARABI, No. 40
MUHAMMAD IBN AL- ATTAR, No. 813
MUHAMMAD IBN AL- NAJIGHĪ AL-ḤIJĀZĪ, No. 0213
MUHAMMAD IBN AL-ADAMI, No. 125
MUHAMMAD IBN AL-AMIN, No. 444
MUHAMMAD IBN ARUS, No. 176
MUHAMMAD IBN AL-ATTAR, No. 284
MUHAMMAD IBN AYYUB, No. 857
MUHAMMAD IBN BAJJA, No. 436
MUHAMMAD IBN AL-BAZYAR, No. 54
MUHAMMAD IBN AL-BILBAYSI, No. 787
MUHAMMAD IBN AL-BURGHUTH, No. 357
MUHAMMAD IBN DURAYD, No. 149
MUHAMMAD IBN GHAZI AL-UTHMANI AL-MIKNASI, No. 913
MUHAMMAD IBN AL-HAJJAJ, No. 734
MUHAMMAD IBN HANI, No. 681
MUHAMMAD IBN ḤASAN SHIRWĀNĪ IṢFAHĀNĪ, No. 0194
MUHAMMAD IBN AL-HAWQAL AL-NASIBI, No. 214
MUHAMMAD IBN AL-HAYTHAM, No. 327
MUHAMMAD IBN AL-HUSAYN, No. 572
MUHAMMAD IBN IBRĀHIM IBN ALĪ, No. 0195
MUHAMMAD IBN IBRĀHĪM IBN RAZIN, No. 0196
MUHAMMAD IBN IDRIS, No. 796
MUHAMMAD IBN AL-IMAM, No. 1411
MUHAMMAD IBN ISMĀ'IL AL-TANUKHI, No. 0197
MUHAMMAD IBN IYAS AL-CHIRKASI, No. 937
MUHAMMAD IBN AL-JUNDI, No. 1245
MUHAMMAD IBN KAMMAD, No. 1374
MUHAMMAD IBN AL-KATIB, No. 537
MUHAMMAD IBN AL-KATTANI AL-ALATI, No. 735
MUHAMMAD IBN KHWĀJA, No. 0229
MUHAMMAD IBN AL-LAYTH, No. 370
MUHAMMAD IBN LABIB, No. 160
MUHAMMAD IBN LURRA, No. 230
MUHAMMAD IBN MANSUR, No. 1065
MUHAMMAD IBN MANSUR, No. 457
MUHAMMAD IBN MANSUR, No. 877
MUHAMMAD IBN MAZIN, No. 333
MUHAMMAD IBN MUBASHSHIR AL-BAGHDADI, No. 550
MUHAMMAD IBN MUFADDAL AL-ABHARI, No. 615
MUHAMMAD IBN MUHAMMAD AL-SHARNAKĀSHĪ, No. 0206
MUHAMMAD IBN MUHAMMAD AL-TABĀDAKĀNI, No. 0207
MUHAMMAD IBN MUHAMMAD IBN MUHAMMAD IBN BAHĀDUR AL-MAWLAWI AL-SHĀFII, No. 0204
MUHAMMAD IBN MUHAMMAD IBN MUHAMMAD IBN ISĀ IBN AHMAD AL-MUWĀSI AL-FĀSI, No. 0205
MUHAMMAD IBN MUHAMMAD IBN UMAR BAHRĀM AL-HADRAMI, No. 0208
MUHAMMAD IBN MUHAMMAD SAID, No. 1257
MUHAMMAD IBN MUHAMMAD, No. 0203
MUHAMMAD IBN MUHAMMAD, No. 1102
MUHAMMAD IBN MURSHID, No. 362
MUHAMMAD IBN AL-NADIM, No. 272
MUHAMMAD IBN NAJIYA, No. 242
MUHAMMAD IBN NASR, No. 350
MUHAMMAD IBN AL-NATTAH, No. 456
MUHAMMAD IBN QADI SHUHBA, No. 852
MUHAMMAD IBN AL-QALAI, No. 1057
MUHAMMAD IBN AL-QARNI, No. 399
MUHAMMAD IBN QĀSIM IBN MUSĀ AL-AYDALI, No. 0211
MUHAMMAD IBN AL-RAQQAM AL-AWSI AL-ANDALUSI, No. 670
MUHAMMAD IBN RAYYAN, No. 468
MUHAMMAD IBN RIDĀ AL-KĀẒIM ṬABARI, No. 0215
MUHAMMAD IBN RIDWAN, No. 729
MUHAMMAD IBN RIDWAN, No. 949
MUHAMMAD IBN RUSHD, No. 512
MUHAMMAD IBN RUSHD, No. 675
MUHAMMAD IBN AL-SABBAH, No. 68
MUHAMMAD IBN AL-SAFFAR, No. 577
MUHAMMAD IBN SALM, No. 412
MUHAMMAD IBN SAMAN, No. 96
MUHAMMAD IBN AL-SARRAJ, No. 143
MUHAMMAD IBN SARTAQ AL-WARARQAYNI AL-MARAGHI, No. 612
MUHAMMAD IBN SHAKIR AL-KUTUBI, No. 740
MUHAMMAD IBN AL-SHIQAQ, No. 332
MUHAMMAD IBN SIMUN, No. 695
MUHAMMAD IBN SUDAT, No. 733
MUHAMMAD IBN SULAYMĀN AL-MAGHRIBI, No. 0224
MUHAMMAD IBN TALHA, No. 586
MUHAMMAD IBN TUFAYL, No. 494
MUHAMMAD IBN TULUN AL-DIMASHQI, No. 993
MUHAMMAD IBN TUMART AL-ANDALUSI, No. 500
MUHAMMAD IBN AL-UKHUWWA, No. 679
MUHAMMAD IBN UMAYYA, No. 508
MUHAMMAD IBN YARBU', No. 540
MUHAMMAD IBN AL-YASAMIN, No. 521
MUHAMMAD IBN WUSUDI, No. 588
MUHAMMAD IBN ZABARDAST KHAN, No. 1266
MUHAMMAD IBN ZAGHBIB, No. 1343
MUHAMMAD IBN ZARB, No. 244
MUHAMMAD IBN ZURAYQ AL-KHAYRI, No. 795
MUHAMMAD AL-IFRIQI, No. 254
MUHAMMAD AL-IRAQI, No. 1420
MUHAMMAD AL-IRBILI, No. 496
MUHAMMAD ISTAMBULI, No. 1291
MUHAMMAD JA'FAR ṬABISI, No. 0198
MUHAMMAD AL-JAMI AL-ALMASI, No. 826
MUHAMMAD AL-JANNAD, No. 909
MUHAMMAD JARAMI, No. 0200
MUHAMMAD JAWAD AL-KAZIMI, No. 1186
MUHAMMAD AL-JAYYANI, No. 340
MUHAMMAD AL-JURJANI, No. 789
MUHAMMAD AL-JUYUBI, No. 352
MUHAMMAD AL-KAFIYAJI (AL-KAFIYECİ), No. 863
MUHAMMAD AL-KALLAI, No. 712
MUHAMMAD AL-KALWADHANI, No. 264
MUHAMMAD AL-KAMALI, No. 688
MUHAMMAD AL-KARAJI, No. 309
MUHAMMAD AL-KATIB, No. 195
MUHAMMAD AL-KATIB AL-KHWARIZMI, No. 274
MUHAMMAD AL-KAWAKIBI, No. 1101
MUHAMMAD AL-KAWASHI, No. 614
MUHAMMAD KHADIM, No. 1162
MUHAMMAD AL-KHAFRI, No. 936
MUHAMMAD AL-KHARAQI, No. 435
MUHAMMAD KHAZINI, No. 1141
MUHAMMAD AL-KHIDRI AL-DIMYATI, No. 1175
MUHAMMAD AL-KHUZAI, No. 604
MUHAMMAD AL-KHWARIZMI, No. 41
MUHAMMAD AL-KILAI, No. 98
MUHAMMAD AL-KINANI, No. 678
MUHAMMAD AL-KISHNAWI AL-ASHARI AL-SUDANI, No. 1283
MUHAMMAD KURDILI, No. 1386
MUHAMMAD AL-KUTAMI, No. 1132
MUHAMMAD AL-KUTUBI, No. 1222
MUHAMMAD AL-LADHIQI, No. 926
MUHAMMAD AL-MAGHRIBI, No. 598
MUHAMMAD AL-MAHANI, No. 82

MUHAMMAD MAH, No. 1317
MUHAMMAD MAHDI IBN MUHAMMAD RIDÂ, No. 0201
MUHAMMAD AL-MAJRITI, No. 354
MUHAMMAD AL-MAKKI, No. 78
MUHAMMAD AL-MA'MURI AL-BAYHAQI, No. 427
MUHAMMAD AL-MANASHIRI, No. 1075
MUHAMMAD AL-MANFALUTI AL-SHADHILI, No. 1366
MUHAMMAD AL-MARWARRUDHI, No. 81
MUHAMMAD AL-MASRURI, No. 324
MUHAMMAD MA'SUM IBN MAWLANÂ BÂBÂ AL-SAMARKANDI AL-BALKHI, No. 0202
MUHAMMAD AL-MAWSILI, No. 1316
MUHAMMAD AL-MAWSILI, No. 768
MUHAMMAD MIKHALIH, No. 1352
MUHAMMAD AL-MUKHALLALATI, No. 1380
MUHAMMAD MULLA CHELEBI AL-AMIDI (MOLLA ÇELEBİ AL-AMİDİ), No. 1143
MUHAMMAD MUNAJJIMAK (MEHMED MÜNECCİMEK), No. 1354
MUHAMMAD AL-MUQADDASI, No. 215
MUHAMMAD AL-MURADI, No. 479
MUHAMMAD AL-MUSAWI, No. 1211
MUHAMMAD AL-NAFRAWI, No. 1371
MUHAMMAD AL-NAHWI, No. 168
MUHAMMAD AL-NAJAMI, No. 1244
MUHAMMAD AL-NAJJAD, No. 323
MUHAMMAD AL-NASAFI, No. 571
MUHAMMAD AL-NIKSARI, No. 871
MUHAMMAD AL-QATARI AL-JAWLANI, No. 1227
MUHAMMAD QAZWINI, No. 1204
MUHAMMAD AL-QONAWI (AL-KONAVİ), No. 933
MUHAMMAD AL-QUDAI, No. 565
MUHAMMAD AL-QUDUQI, No. 1277
MUHAMMAD AL-QUMMI, No. 183
MUHAMMAD AL-QUMMI, No. 331
MUHAMMAD RAHIM BADKUBI, No. 1079
MUHAMMAD AL-RAQUTI, No. 646
MUHAMMAD RASHID AL-DIN, No. 1363
MUHAMMAD AL-RASHIDI, No. 743
MUHAMMAD AL-RASMUKI, No. 1358
MUHAMMAD AL-RAZI, No. 142
MUHAMMAD RIDÂ IBN INÂYATALLÂH, No. 0214
MUHAMMAD RIDÂ IBN MUHAMMAD HÂSHIM YAZDI, No. 0216
MUHAMMAD AL-RUAYNI AL-MALIKI, No. 964
MUHAMMAD AL-RUDANI, No. 1176
MUHAMMAD AL-RUSTAI, No. 1285
MUHAMMAD AL-SABAI, No. 106
MUHAMMAD AL-SABBAN, No. 1382
MUHAMMAD AL-SABTI AL-LAKHMI, No. 483
MUHAMMAD AL-SABZAWARI, No. 1262(557)
MUHAMMAD-SADIQ AL-ISFAHANI AL-AZADANI, No. 1112
MUHAMMAD SADIQ JIHANGIRI (CİHANGİRLİ MUHAMMED SADIK EFENDİ), No. 1385
MUHAMMAD SAID AL-DIN, No. 0219
MUHAMMAD SAID IBN ADUD AL-DIN ABD AL-LAṬIF QANDAHARI, No. 0217
MUHAMMAD SAID IBN MUHAMMAD WALI, No. 0218
MUHAMMAD SAID MUFTI-ZADA YANISHAHRI (MÜFTİ-ZADE-İ YENİŞEHRİ MEHMED SAİD), No. 1387
MUHAMMAD AL-SAKHRI AL-HARRI, No. 1137
MUHAMMAD SAKKAKI, No. 559
MUHAMMAD AL-SALAMI, No. 542
MUHAMMAD SALAH AL-DIN JIHANDAR-SHAHI, No. 1326
MUHAMMAD SALAH AL-HUSAYNI, No. 1274
MUHAMMAD SALIH TABATABAI YAZDI, No. 1320
MUHAMMAD SALIM IBN HUSAYN (MEHMED SELİM HOCA), No. 1329
MUHAMMAD AL-SAMARKANDI, No. 87
MUHAMMAD SANJAQDAR AL-TUNISI, No. 1169
MUHAMMAD AL-SANUSI, No. 866
MUHAMMAD AL-SARAKHSI, No. 227
MUHAMMAD AL-SARAQUSTI, No. 371
MUHAMMAD AL-SARAQUSTI, No. 452
MUHAMMAD SÂTI IBN AWWÂD, No. 0222
MUHAMMAD SAQQÂR, No. 0221
MUHAMMAD AL-SAYMARI, No. 93
MUHAMMAD SHABRAMALLISI, No. 1074
MUHAMMAD-SHAH AL-FANARI, No. 806
MUHAMMAD-SHAH FANARI-ZADE (FENARİ-ZADE), No. 921
MUHAMMAD AL-SHAHRASTANI, No. 461
MUHAMMAD AL-SHAHRAZURI, No. 474
MUHAMMAD SHÂKIR IBN ḤAMMÂD QÂZÂNI, No. 0235
MUHAMMAD SHAMS AL-DÎN IBN MUHAMMAD AL-KHWÂNAKI, No. 0236
MUHAMMAD AL-SHANNI, No. 344
MUHAMMAD AL-SHANTIYALI, No. 539
MUHAMMAD AL- SHARIFI, No. 416
MUHAMMAD AL-SHATAWI, No. 239
MUHAMMAD AL-SHINSHAWRI No. 999
MUHAMMAD SHILLI BAALAWI, No. 1224
MUHAMMAD SIBT AL-MARIDINI, No. 873
MUHAMMAD AL-SIJZI, No. 292
MUHAMMAD SIPAHI-ZADE BURSAWI (SİPAHİ-ZADE), No 1009
MUHAMMAD AL-SIQILLI, No. 465
MUHAMMAD SIRÂJ, No. 0223
MUHAMMAD ṢÂLIH AL-HUSAYNI, No. 0220
MUHAMMAD AL-SUSI AL-MARGHITHI, No. 1166
MUHAMMAD TABRIZI, No. 1310
MUHAMMAD AL-TABARI, No. 301
MUHAMMAD AL-TABARI, No. 58
MUHAMMAD AL-TABRIZI, No. 1305
MUHAMMAD TAHIR BALKHI, No. 1157
MUHAMMAD AL-TAMIMI, No. 867
MUHAMMAD AL-TANUKHI, No. 184
MUHAMAD AL-ṬARÂBULUSI, No. 0225
MUHAMMAD AL-TARASUSI, No. 507
MUHAMMAD AL-TILIMSANI, No. 1183
MUHAMMAD AL-TUJIBI, No. 433
MUHAMMAD AL-TUSI, No. 518
MUHAMMAD AL-UKAYLI, No. 1159
MUHAMMAD AL-URDI, No. 823
MUHAMMAD UTHMAN, No. 1405
MUHAMMAD AL-UTHMANI AL-FARIQI, No. 639
MUHAMMAD AL-WABKANWI, No. 709
MUHAMAD AL-WADIASHI, No. 495
MUHAMMAD AL-WARZAZI, No. 1362
MUHAMMAD YUSUF, No. 0237
MUHAMMAD AL-ZABIDI, No. 1149
MUHAMMAD AL-ZAKI AL-GHAZNAWI, No. 459
MUHAMMAD ZAMAN ASTURLABI MASHHADI, No. 1188
MUHAMMAD ZAMAN DIHLAWI, No. 1259
MUHAMMAD ZAMAN FAYYAD, No. 1408
MEHMED SELİM HOCA = see, MUHAMMAD SALIM IBN HUSAYN (MEHMED SELİM HOCA), No. 1329
AL-MUHASSIN IBN IBRAHIM AL-SABI', No. 253
MUHIBALLAH ALLAHABADI, No. 967
MUHIBBALLAH AL-BIHARI, No. 1241
MUHSIN BÂZ MUHAMMAD ṬÂHIR, No. 0238
MUHSIN AL-HASANI, No. 1318
MUHYI AL-DIN, No. 1308
MUHYI AL-DIN AL-AKHWIN (AHAVAYN), No. 893
MUHYI AL-DIN AL-FAYUMI, No. 1050
MUHYI AL-DIN IBN AHMAD AL-MÂLIHI, No. 0239
MUHYI AL-DIN IBN ḤUSAYN IBN ALI AL-ḤADRAMI, No. 0240
MUHYI AL-DIN AL-MAGHRIBI, No. 635
MUHYI AL-DIN PIRI RAIS (PİRİ REİS), No. 969
MUHYI AL-DIN AL-SAKHAWI, No. 1026
MUIN AL-DIN AL-KASHI, No. 835
AL-MUKHALLALATI = see, MUHAMMAD AL-MUKHALLALATI, No. 1380
MUKHTAR AL-RUAYNI, No. 381
MULCHAND PRASHAD, No. 1324
MULLA CHAND, No. 1029
MULLA MUHAMMAD AL-GHULUDI, No. 1067

MULLA TARZI, No. 1053
AL-MUNAWI = see, ABDALLAH AL-MUNAWI, No. 1234
AL-MUQADDASI = see, MUHAMMAD AL-MUQADDASI, No. 215
AL-MUQTADIR = see, AHMAD AL-MUQTADIR, No. 390
AL-MURADI = see, MUHAMMAD AL-MURADI, No. 479
MURTADA AL-SHARIFI, No. 952
MURTAFA' AL-SAATI, No. 742
MUSA AL-ABSHADI AL-HUSAYNI, No. 1231
MUSA AL-GHUMRI, No. 1275
MUSA GALINUS AL-ISRAILI AL-YATRAWI, No. 948
MUSA IBN YASIN, No. 166
MUSA AL-NAWBAKHT, No. 260
MUSAFIR AL-MUQAWWI, No. 347
MUSHIR AL-DAWLA MUHANDIS-BASHI, No. 1423
MUSLIH AL-DIN AL-LARI AL-ANSARI, No. 994
MUSLIH AL-DIN IBN SINAN, No. 934
MUSLIM AL-LAYTHI, No. 113
MUSLIM AL-SHAYZARI, No. 575
MUSTAFA AL-BULAWI, No. 1151
MUSTAFA EFENDI, No. 1196
MUSTAFA HAJJI KHALIFA (KATİP ÇELEBİ), No. 1145
MUSTAFA IBN SUHRAB, No. 1235
MUSTAFA ISTANBULI, No. 1073
MUSTAFA KATIB-ZADA (KATİP-ZADE), No. 1164
MUSTAFA AL-QASTALANI AL-RUMI, No. 889
MUSTAFA AL-QONAWI, SHEIKH WAFA (MUSTAFA EL-KONEVİ, ŞEYH VEFA) , No. 872
MUSTAFA AL-SALIMI QOJA SAATJI (AL-MUVAKKİT), No. 990
MUSTAFA AL-SHIRKASI, No. 1217
MUSTAFA SIDQI, No. 1348
MUSTAFA AL-TAI, No. 1365
MUSTAFA AL-WAFAI AL-KHAYYAT, No. 1404
MUTARRIF AL-ISHBILI, No. 623
AL-MUTARRIFI = see, AHMAD AL-MUTARRIFI, No. 1027
AL-MUVAKKİT = see, MUSTAFA AL-SALIMI QOJA SAATJI (AL-MUVAKKİT), No. 990
MUWAFFAQ AL-DIN AL-RAHBI, No. 493
MUWAFFAQ AL-MASQALI, No. 442
MUWAFFAQ AL-QAYSARI, No. 692
AL-MUZAFFAR AL-ASFIZARI, No. 423
MUẒAFFAR IBN MUHAMMAD FÂRISI IKHTIYÂR, No. 0244
MUZAFFAR AL-JUNABADI, No. 1069
MUZAFFAR NUJUMI, No. 1070
MÜEYYED-ZADE= see, ABD AL-RAHMAN MUAYYAD-ZADA (MÜEYYED-ZADE), No. 935
MÜFTİ-ZADE-İ YENİŞEHRİ MEHMED SAİD = see, MUHAMMAD SAID MUFTI-ZADA YANISHAHRI (MÜFTİ-ZADE-İ YENİŞEHRİ MEHMED SAİD), No. 1387
MÜNECCİM BALİ = see, BALI MUNAJJIM (MÜNECCİM BALİ), No. 854
MÜNECCİMBAŞI AHMED DEDE = see, AHMAD AL-SALANIQI MUNAJJIM-BASHI, (MÜNECCİMBAŞI AHMED DEDE)No. 1239
MÜNECCİMEK = see, MUHAMMAD MUNAJJIMAK (MÜNECCİMEK), No. 1354

-N-

AL-NABTITI = see, ABD AL-MUN IM AL-NABTITI, No. 1163
AL-NABTITI = see, ALI AL-NABTITI, No. 1119
NADI, No. 0245
NAJIB HAMADHANI, No. 517
NAJM AL-DIN AL-AHDAB, No. 643
NAJM AL-DIN IBN AL-LUBUDI, No. 599
NAJM AL-DIN IBN AL-RIFA, No. 667
NAJM AL-DIN AL-IKHLATI, No. 580
NAJM AL-DIN AL-KATIBI AL-QAZWINI, No. 616
NAJM AL-DİN MAHMUD IBN UMAR ṬIYÂN ABARKUHI, No. 0148
NAJM AL-DIN AL-MISRI, No. 954
NAJM AL-DIN AL-QAHFAZI, No. 699
NAJM AL-DIN KHAN KAKORAWI, No. 1410
NA'MA AL-ZAYDI, No. 396
NAND RAM KAIS, No. 1172
AL-NASAFI = see, UMAR AL-NASAFI, No. 437
AL-NASAWI = see, ALI AL-NASAWI, No. 341
NASHWAN AL-HIMYARI, No. 488
NASIR AL-DIN AL-TUSI, No. 606
NASIR AL-DIN HUMAYUN, No. 971
NASIR-I KHUSRAW, No. 393
NAṢIR AL-DİN IBN ISÂ AL-ḤAṢKAFI, No. 0246
NASR AL-AZIZI, No. 268
NASUH AL-SALAHI AL-MATRAQI, No. 1001
AL-NAWAWI = see, IBRAHIM AL-NAWAWI, No. 838
NAWBAKHT, No. 7
AL-NAWBAKHTI = see, AL-HASAN AL-NAWBAKHTI, No. 127
AL-NAYRİZI = see, ABU MANṢUR AL-NAYRİZI, No. 0152
AL-NAYRIZI = see, AL-FADL AL-NAYRIZI, No. 135
NAZIF IBN YUMN, No. 243
NAẒAR ALİ, No. 0247
AL-NAZR IBN SHUMAYL, No. 25
AL-NAZZAM = see, IBRAHIM AL-NAZZAM, No. 60
AL-NIKSARI = see, MUHAMMAD AL-NIKSARI, No. 871
NI'MATALLAH AL-KIRMANI, No. 803
NIZAM AL-DIN AL-BAZDAWI, No. 756
NIZAM AL-DIN AL-BIRJANDI, No. 938
NIZAM AL-DIN AL-HUSAYNI, No. 899
NIZAM AL-DIN AL-NAYSABURI, No. 686
NIZAM AL-DIN AL-SHAHID, No. 1398
NIZAM AL-DIN GILANI, No. 1113
NIZAMI = see, AHMAD NIZAMI SAMARKANDI, No. 453
NUẠYM IBN SHAKIR, No. 75
NUQTA IBN MA'RUF, No. 1005
NUR AL-DIN AL-ANSARI AL-MAKKI, No. 1066
NUR AL-DIN AL-BALKHI, No. 259
NUR AL-DIN AL-BALKHI, No. 818
NUR AL-DIN AL- BITRUJI, No. 526
NUR AL-DIN IBN MUHAMMAD, No. 1138
NUR AL-DIN IBN SIRÂJ AL-DİN, No. 0248
NUR AL-DIN IBN ZUNBUL AL-MAHALLI, No. 989
NUR AL-DIN AL-KHAFAJI, No. 1389
NUR AL-DIN AL-WÂSIṬI, No. 0249
NURALLÂH IBN MUHAMMAD ḤUSAYNI SHUSHTARI, No. 0250
NUWWÂB SHAMS AL-UMARÂ MUHAMMAD FAKHR AL-DİN, No. 0227

-O-

OSMAN B. ABDULMANNAN = see, UTHMAN AL-MUHTADI (OSMAN B. ABDULMANNAN) No. 1351
OSMAN EFENDI, No. 0281

-P-

PANDIT RAJ NIMDHAR, No. 1413
PARWIZ AL-RUMI (PERVİZ ABDULLAH), No. 1000
PIR MAHMUD SARAFI, No. 920
PİRİ REİS = see, MUHYI AL-DIN PIRI RAIS (PİRİ REİS), No. 969

-Q-

AL-QABISI = see, ABD AL-AZIZ AL-QABISI, No. 205
AL-QABUJÂQI = see, MUHAMMAD AṬIF IBN ABD AL-RAHMAN AL-QABUJÂQI, No. 0188
QÂDI ḤASAN IBN QÂDI MUHAMMAD MAKKI AL-FAṢIHI, No. 0160
AL-QAINI = see, ABU MUHAMMAD AL-ADLI AL-QAINI, No. 315
AL-QAINI = see, ALI AL-QAINI, No. 346
QAINI = see, KÂFI QAINI, No. 0133
AL-QAINI = see, QASIM AL-ALI AL-QAINI, No. 1108

AL-QALASADI = see, ALI AL-QALASADI, No. 865
AL-QALYUBI = see, SHIHAB AL-DIN AL-QALYUBI, No. 1134
AL-QARAFI = see, AHMAD AL-QARAFI, No. 631
QASIM AL-ALI AL-QAINI, No. 1108
QASIM AL-KHANI, No. 1249
QASIM AL-QATTAN AL-ANDALUSI, No. 182
QASIM ISFAHANI, No. 902
AL-QASRANI = see, ABU'L-QASIM AL-QASRANI, No. 294
AL-QASRANI = see, YA'QUB AL-QASRANI, No. 95
AL-QASTALANI = see, AHMAD AL-QASTALANI AL-MISRI, No. 942
AL-QASTALANI = see, MUSTAFA AL-QASTALANI AL-RUMI, No. 889
AL-QATARI = see, MUHAMMAD AL-QATARI AL-JAWLANI, No. 1227
AL-QATTAN = see, QASIM AL-QATTAN AL-ANDALUSI, No. 182
QAWAM MASUD QARAMANI, No. 1020
AL- QAYMARI, No. 801
QAZI-ZADA AL-RUMI (KADI-ZADE), No. 808
QAZWINI = see, MUHAMMAD QAZWINI, No. 1204
AL-QAZWINI = see, ZAKARIYA AL-QAZWINI, No. 624
QIWÂM AL-DIN QAZWINI, No. 0251
QIWAM AL-DIN AL-KHAFRI, No. 1025
QIWAM AL-DIN AL-SHAYBANI, No. 511
AL-QUDAI = see, ABDALLAH AL-QUDAI, No. 536
AL-QUDAI = see, MUHAMMAD AL-QUDAI, No. 565
AL-QURTUBI = see, ISMAIL AL-QURTUBI, No. 404
QUSTA IBN LUQA AL-BAALBAKI, No. 118
QUTB AL-DIN HUSRAW-SHAH, No. 804
QUTB AL-DIN LAHIJI, No. 1270
QUTB AL-DIN AL-LARI, No. 1109
QUTB AL-DIN AL-MAHALLI AL-QABBANI, No. 1160
QUTB AL-DIN AL-QAINI, No. 973
QUTB AL-DIN AL-SHIRAZI, No. 668
QUTB AL-DIN TABATABAI YAZDI, No. 1319

-R-

RÂDI AL-DIN MUHAMMAD AL-GHAZNAWI, No. 0191
RABI' AL-USQUF, No. 250
RADI AL-DIN IBN AL-HANBALI, No. 980
RAFI AL-DIN DIHLAWI, No. 0252
RAGIP PAŞA = see RAGHIB PASHA WAZIR , No. 1347
RAGIB PAŞA HOCASI = see, IBRAHIM AL-HALABI RAGHIB PASHA KHWAJASI (RAGIB PAŞA HOCASI), No. 1349
RAGHIB PASHA WAZIR (RAGIP PAŞA), No. 1347
RAMADAN AL-JAZAIRI, No. 1155
RAMADAN AL-SAFATI AL-KHWANAKI, No. 1323
RASHID AL-DIN AL-WATWAT, No. 489
RASHID AL-DIN FADLALLAH, No. 656
AL-RAZI = see, FAKHR AL-DIN AL-RAZI, No. 535
RIDWAN AL-RAZZAZ, No. 1243
RIDWAN IBN AL-SA'ATI, No. 562
RIZQALLAH AL-NAHHAS, No. 430
AL-RUAYNI = see, MUHAMMAD AL-RUAYNI AL-MALIKI, No. 964
AL-RUAYNI = see, MUKHTAR AL-RUAYNI, No. 381
AL-RUAYNI = see, YAHYA AL-RUAYNI, No. 1006
AL-RUDANI = see, MUHAMMAD AL-RUDANI, No. 1176
RUKN AL-DIN GURGÂNI, No. 0253
RUKN AL-DIN AL-AMULI, No. 951
RUSTAM AL-HAWAFI, No. 1265
RUYANI = see, ABD AL-QADIR RUYANI, No. 915

-S-

SA'D AL-DIN AL-TAFTAZANI, No. 772
SA'D AL-TUJIBI, No. 702
SA'D HAMZA IBN ALI SHÂKIR NAYSÂBURI, No. 0254
AL-SADAFI = see, AHMAD AL-SADAFI, No. 379
AL-SADAFI = see, ALI IBN YUNIS AL-SADAFI, No. 283
SADIQ MAWLAWI, No. 1298
SADR AL-DIN AL-HASANI, No. 1309
SADR AL-DIN AL-HUSAYNI, No. 1307
SADR AL-DIN AL-TUSI, No. 610
SADR AL-SHARIA AL-BUKHARI, No. 706
SAFDAR ALI KHAN SHIRAZI, No. 1418
SAFI AL-DIN AL-URMAWI AL-BAGHDADI, No. 641
AL-ŞAFRAWÎ = see, ZAKI AL-DIN ABU BAKR ABD AL-WAHHÂB AL-ŞAFRAWI, No. 077
AL-SAGHANI = see, AHMAD AL-SAGHANI, No. 223
SAHL AL-TABARI, No. 49
SAHL IBN AL-ATTAR, No. 258
SAHL IBN BISHR, No. 50
SAHNUN AL-WANSHARISI, No. 1359
SAID ALI HAMADÂNI, No. 0255
SA'ID IBN AL-BAGHUNISH, No. 358
SAID IBN IBRÂHIM, No. 0256
SAID MANŞUR, No. 0257
SAID AL-ANDALUSI AL-QURTUBI, No. 384
SAID AL-DIMASHQI, No. 155
SAID AL-FARADI, No. 178
SAID AL-MUTATABBIB, No. 403
SAID AL-SAMARKANDI, No. 189
SAID AL-SAMLALI, No. 851(440b
SAID AL-SARAQUSTI, No. 262
SAID AL-TINBUKTI AL-JANAWI, No. 1218
SAID AL-UQBANI, No. 781
SAID IBN AWS AL-ANSARI, No. 29
SAIDI IBN KHALIL, No. 1345
AL-SAJAWANDI = see, SIRAJ AL-DIN AL-SAJAWANDI, No. 527
SAKKAKI = see, MUHAMMAD SAKKAKI, No. 559
SAKKAKI = see, SIRAJ AL-DIN AL-SAKKAKI, No. 558
AL-SALAHI, No. 710
AL-ŞÂLIH AHMAD IBN MUSÂ AL-ḤÂMILI, No. 0262
SALAM, No. 35
SALHAB AL-FARADI, No. 130
SALIH EFENDI AL-MI'MARI, No. 1384
SALIH AL-QASSAM, No. 245
SALIH AL-RUNDI, No. 626
SALIH AL-SAKSAKI, No. 669
SALIM IBN SHEIKHAN, No. 1097
AL-SAMARKANDI = see, SHAMS AL-DIN AL-SAMARKANDI, No. 655
AL-SAMAW'AL AL-MAGHRIBI, No. 487
SANAD IBN ALI, No. 48
SANJAQDAR = see, MUHAMMAD SANJAQDAR AL-TUNISI, No. 1169
AL-SANUSI = see, MUHAMMAD AL-SANUSI, No. 866
SAQI MUHAMMAD CHAHARYAKI, No. 1200
AL-SARAKHSI = see, AHMAD AL-SARAKHSI, No. 100
AL-SARAKHSI = see, MUHAMMAD AL-SARAKHSI, No. 227
SARIJA AL-MALATI AL-MARIDINI, No. 751
SARUP SINGH, No. 0258
SAWAY JAY SINGH, No. 1322
AL-SAYMARI = see, MUHAMMAD AL-SAYMARI, No. 93
SAYYID ABDALLAH AL-QUNYAWI (AI-KONEVİ), No. 1422
SAYYID ALI KHWANSARI, No. 1306
SAYYID ALI, No. 0260
SAYYID AHMAD IBN AL-SAYYID ABD AL-JABBÂR IBN SAYYID IBRÂHÎM IBN SAYYID HÂSHIM "QÂDI AL-BAŞRI", No. 0259
SAYYID HUSAYNI, No. 1161
SAYYID IŞFAHÂNI, No. 0261
SAYYID SUBHAN MUHAMMAD, No. 1238
SAYYIDI IBN SUDUN, No. 929
SEVERUS SEBOKHT, No. 2
SHA'BÂN IBN ḤUSAYN, No. 0265
SHA'BAN AL-QASTAMUNI (AL-KASTAMONİ), No. 987
SHABRAMALLISI = see, MUHAMMAD SHABRAMALLISI, No. 1074
AL-SHAFÎ = see, MUHAMMAD IBN IDRIS, No. 796
SHÂH FATTÂH IBN SA'DALLÂH AL-ḤUSAYNI, No. 0266
SHAH FATH ALLAH AL-SHIRWANI, No. 868

SHAH FATHALLAH SHIRAZI, No. 1023
SHAH MARDAN RAZI, No. 467
SHAH SHUJA', No. 1148
AL-SHAHRASTANI = see, MUHAMMAD AL-SHAHRASTANI, No. 461
AL-SHAHRAZURI = see, MUHAMMAD AL-SHAHRAZURI, No. 474
SHAMS AL-ULAMĀ JURJĀNI, No. 0268
SHAMS AL-DIN ABU'L-MAFĀKHIR UMAR IBN AL-MUZAFFAR IBN RUZBIHĀN, No. 0279
SHAMS AL-DIN AZIZ IBN MUHAMMAD AL-KHIDHRI, No. 074
SHAMS Al-DIN AL-BALAPURI, No. 1334
SHAMS AL-DIN AL-BUKHARI, No. 694
SHAMS AL-DIN AL-HASANI, No. 1299
SHAMS AL-DIN AL-HUNAYD, No. 1007
SHAMS AL-DIN IBN AL-SHAMMA, No. 830
SHAMS AL-DIN IBN KHALLIKAN, No. 625
SHAMS AL-DIN MUHAMMAD AL-DIMASHQI, No. 691
SHAMS AL-DIN AL-IRBILI, No. 892
SHAMS AL-DIN AL-JAZULI, No. 737
SHAMS AL-DIN AL-KHALILI, No. 764
SHAMS AL-DIN AL-LADHIQI, No. 1052
SHAMS AL-DIN AL-MANUFI, No. 1012
SHAMS AL-DIN AL-MIZZI, No. 715
SHAMS AL-DIN AL-SAMARKANDI, No. 655
SHAMS AL-DIN AL-SUFI AL-MISRI, No. 888
SHAMS AL-DIN AL-TIZINI, No. 903
SHAMS AL-DIN AL-URMAYUNI, No. 1017
SHAMS AL-DIN AL-WAFAI AL-SUYUTI, No. 945
SHAMS AL-DIN AL-ZARKASHI, No. 647
SHAMS-I SIRAJ AFIF, No. 765
SHARAF AL-DIN AHMAD AL-BAYHAQI, No. 036
SHARAF AL-DIN ALI YAZDI, No. 825
SHARAF AL-DIN AL-AMUNI, No. 502
SHARAF AL-DIN AL-BURSAWI, No. 574
SHARAF AL-DIN AL-HABASHI, No. 0271
SHARAF AL-DIN JAMĀL, No. 0131
SHARAF AL-DIN AL- KHALILI, No. 797
SHARAF AL-DIN MUSĀ AL-BULDĀNI, No. 0242
SHARAF AL-DIN AL-MASUDI, No. 666
SHARAF AL-DIN AL-SAMARKANDI, No. 630
SHARAF AL-DIN AL-TUSI, No. 541
AL-SHARAF AL-UMAR AL-TAI, No. 0270
AL-SHARIF AHMAD IBN MUHAMMAD AL-MAHDI, No. 0272
AL-SHARJI = see, ABDALLAH AL-MUTHANNA AL-SHARJI, No. 1208
AL-SHARJI = see, AL-HASAN AL-SHARJI, No. 1152
SHA'YA IBN FIRIGHUN, No. 263
SHAYTAN ABDALLAH AL-THUGHRATI, No. 1376
SHIHĀB AL-DIN AHMAD, No. 028
SHIHĀB AL-DIN AHMAD, No. 029
SHIHĀB AL-DIN AHMAD SHĀFII, No. 048
SHIHAB AL-DIN AL-AJMAWI, No. 1076
SHIHAB AL-DIN IBN AL-HAIM, No. 783
SHIHAB AL-DIN IBN AL-MAJDI, No. 815
SHIHĀB AL-DIN IBN MUHAMMAD IBN IBRĀHIM AL-ASHARI, No. 0263
SHIHAB AL-DIN IBN AL-SARRAJ AL-HAMAWI, No. 732
SHIHAB AL-DIN IBN SAADA, No. 640
SHIHAB AL-DIN IBN TAJ AL-DIN, No. 1156
SHIHAB AL-DIN AL-GHAZZI AL-MAGHRIBI, No. 997
SHIHAB AL-DIN AL-KAWM AL-RISHI, No. 800
SHIHAB AL-DIN AL-MALIKI, No. 955
SHIHAB AL-DIN AL-MIKNASI AL-ZANATI, No. 1085
SHIHAB AL-DIN AL-QALYUBI, No. 1134
SHIHĀB AL-DIN AL-SHĀFII, No. 0273
SHIHAB AL-DIN AL-SUHRAWARDI, No. 497
SHIHAB AL-DIN AL-UMARI, No. 717
AL SHINSHAWRI = see, ABDALLAH AL-SHINSHAWRI, No. 1011
AL-SHINSHAWRI = see, MUHAMMAD AL-SHINSHAWRI No. 999
AL-SHIRKASI = see, MUSTAFA AL-SHIRKASI, No. 1217
SIBT AL-MARIDINI = see, MUHAMMAD SIBT AL-MARIDINI, No. 873
SIDI ABDALLAH IBN HAMZA, No. 1260
SIDI HASAN AL-QOMANATI (AL-KOMANATİ), No. 859
SIDI KATIB-I RUMI (SEYDİ ALİ REİS), No. 977
AL-SIJZI = see, ABU SAID AL-SIJZI, No. 296
AL-SIJZI = see, MUHAMMAD AL-SIJZI, No. 292
SIMAN AL-KABULI, No. 13
SINAN IBN AL-FATH, No. 231
SINAN IBN THABIT, No. 169
SİNAN PAŞA = see, YUSUF SINAN-PASHA (SİNAN PAŞA), No. 858
SİPAHİ-ZADE = see, MUHAMMAD SIPAHI-ZADE BURSAWI (SİPAHİ-ZADE), No. 1009
AL-SIRAFI = see, ABDALLAH AL-SIRAFI, No. 202
AL-SIRAFI = see, AL-HASAN AL-SIRAFI, No. 203
SIRAJ AL-DIN AL-FARISKURI, No. 1046
SIRAJ AL-DIN AL-SAJAWANDI, No. 527
SIRAJ AL-DIN AL-SAKKAKI, No. 558
AL-SIVASI = see, AL-HASAN AL-SİVASI, No. 613
SÖYLEMEZ-ZADE = see, ABD AL-HALIM AL-QAYSARI SÖYLEMEZ-ZADA (ABDULHALİM AL-KAYSERİ SÖYLEMEZ-ZADE), No. 1312
AL-SUBKI = see, TAQI AL-DIN AL-SUBKI, No. 726
SUDUN AL-BASHTAKI, No. 928
SUFYAN AL-THAWRI, No. 8
AL-SUFI = see, ABD AL-RAHMAN AL-SUFI, No. 212
AL-SUGHDI = see, JAMAL AL-DIN AL-SUGHDI AL-TURKISTANI, No. 718
AL-SUJAI = see, AHMAD AL-SUJAI, No. 1377
SULAYMAN AL-BUKHARI, No. 895
SULAYMAN AL-MAHRI, No. 956
SULAYMAN AL-MAWSILI, No. 367
SULAYMAN IBN ISMA AL-SAMARKANDI, No. 181
SULAYMAN AL-UTHMANI AL-HANAFI, No. 1040
SULTAN MUHAMMAD AL-BALKHI, No. 1061
AL-SULTAN AL-AFDAL ABBAS, No. 607
AL-SULTAN AL-MU'AYYAD, No. 689
AL-SUNBATI = see, AHMAD AL-SUNBATI, No. 1002
AL-SUYUTI = see, JALAL AL-DIN AL-SUYUTI, No. 896
SUPHİ-ZADE = see, ABD AL-AZIZ SUBHI-ZADA (SUPHİ-ZADE), No. 1292
ŞEYH VEFA = see, MUSTAFA AL-QONAWI, SHEİKH WAFA (MUSTAFA EL-KONEVİ, ŞEYH VEFA), No. 872

-T-

TABARI = see, ABU JA'FAR TABARI, No. 409
AL-TABARI = see, MUHAMMAD AL-TABARI, No. 301
AL-TABARI = see, MUHAMMAD AL-TABARI, No. 58
AL-TAFTAZANI = see, AHMAD AL-TAFTAZANI, No. 906
AL-TAFTAZANI = see, SA'D AL-DIN AL-TAFTAZANI, No. 772
TAHIR AL-HALABI, No. 514
ṬĀHIR AL-HUSAYNI, No. 0274
TĀJ AL-DIN ALI SHIRĀZI, No. 064
TĀJ [AL-DIN] AL-LĀRI, No. 0275
TAJ AL-DIN AL-TABRIZI, No. 714
AL-TAJURI = see, ABD AL-RAHMAN AL-TARABULUSI AL-TAJURI, No. 1008
TAKIYUDDİN AL-RAŞİD = see, TAQI AL-DIN AL-SHA'M AL RASID (TAKİYUDDİN AL-RASİD), No. 1004
AL-TAKRITI = see, YAHYA AL-TAKRITI, No. 366
AL-TANTAWI = see, HASAN AL-TANTAWI, No. 1219
AL-TANUKHI = see, MUHAMMAD IBN ISMĀ'IL AL-TANUKHI, No. 0197
AL-TANUKHI = see, MUHAMMAD AL-TANUKHI, No. 184
AL-TANUKHI = see, ZAYN AL-DIN ABU'L-ABDALLĀH MUHAMMAD IBN AMR AL-TANUKHI AL-MAARRI, No 0183
TAQI AL-DIN ABU TAHIR, No. 767

TAQI AL-DIN AL-FARISI, No. 972
TAQI AL-DIN AL-HANBALI, No. 782
TAQI AL-DIN AL-SUBKI, No. 726
TAQI AL-DIN AL-SHA'M AL RASID (TAKİYUDDİN AL-RASİD), No. 1004
AL-TARASUSI = see, MUHAMMAD AL-TARASUSI, No. 507
TASHKUBRI-ZADA = see, ABU'L-KHAYR TASHKUBRI-ZADA (TAŞKÖPRİ-ZADE), No. 974
TAŞKÖPRİ-ZADE = see, ABU'L-KHAYR TASHKUBRI-ZADA (TAŞKÖPRİ-ZADE), No. 974
TAWFIQ IBN AL-HUSAYN, No. 419
TAYYIB AL- DIHLAWI AL-MUHANDIS, No. 1034
TEZKİRECİ KÖSE İBRAHİM = see, IBRAHIM IBN MUHAMMAD (TEZKİRECİ KÖSE İBRAHİM), No. 1230
THABIT IBN IBRAHIM AL-HARRANI, No. 200
THABIT IBN QURRA, No. 103
THABIT IBN SINAN, No. 197
THEODORUS OF ANTIOCHIA, No. 564
THIYUFIL IBN THUMA, No. 10
AL-TIBUGHA AL-BAKLIMISHI, No. 761
AL-TIFASHI = see, AHMAD AL-TIFASHI, No. 585
AL-TILIMSANI = see, AHMAD AL-TILIMSANI, No. 1225
AL-TIRMIDHI = see, ALI IBN BADR AL-TIRMIDHI, No. 054
AL-TIZINI = see, SHAMS AL-DIN AL-TIZINI, No. 903
AL-TUJIBI = see, SA'D AL-TUJIBI, No. 702
TURSUN AL-ZAMINI AL-FARAIDI, No. 1201
AL-TUSI = see, MUHAMMAD AL-TUSI, No. 518
AL-TUSI = see, SHARAF AL-DIN AL-TUSI, No. 541
TUSTARI = see, ABU'L-FUTUH TUSTARI, No. 087

-U-

UBAYDALLAH AL-BAHILI, No. 464
UBAYDALLAH IBN KHURDADHBIH, No. 120
AL-UJAYMI = see, HASAN AL-UJAYMI, No. 1237
AL-UKBARI = see, MUHABB AL-DIN AL-UKBARI, No. 545
ULUGH BEG GURAGAN, No. 816
UMAYYA ABU'L-SALT AL-ANDALUSI, No. 431
UMAYYA IBN ABD AL-AZIZ, No. 466
UMAR ABD AL-AZIZ, No. 0276
UMAR AL-FARIQI, No. 636
UMAR AL-FARISI, No. 705
UMAR AL-HADRAMI, No. 363
UMAR AL-HAWZANI, No. 372
UMAR IBN ABD AL-KHALIQ, No. 138
UMAR IBN ABI 'L-WAFA, No. 257
UMAR IBN AHMAD AL-ḤAQQ, No. 0277
UMAR IBN AL-FARRUKHAN AL-TABARI, No. 27
UMAR IBN AL-MALIK, No. 685
UMAR IBN AL-QUNI, No. 400
UMAR IBN YUSUF, No. 161
UMAR AL-MAGHRIBI, No. 1338
UMAR AL-MAI AL-CHILLI (AL-ÇULLİ), No. 1342
UMAR AL-MARWARRUDHI, No. 108
UMAR AL-NASAFI, No. 437
UMAR AL-QURASHI AL-TUNISI, No. 848
UMAR KHAYYAM, No. 420
AL-UQLIDISI = see, AHMAD AL-UQLIDISI, No. 232
AL-URDI = see, MUAYYAD AL-DIN AL-URDI, No. 629
AL-URDI = see, MUHAMMAD AL-URDI, No. 823
AL-URMAYUNI = see, SHAMS AL-DIN AL-URMAYUNI, No. 1017
URUD AL-DIN AL-NAQIB, No. 0226
UTARID, No. 233
UTHMAN AL-MALIK AL-DIMASHQI, No. 1036
UTHMAN AL-MUHTADI (OSMAN B. ABDULMANNAN) No. 1351
UTHMAN AL-MUWARRAI, No. 1395
UTHMAN IBN AL-HAJIB, No. 582
AL-UTHMANI = see, MUHAMMAD IBN GHAZI AL-UTHMANI AL-MIKNASI, No. 913

-W-

AL-WADIASHI = see, MUHAMAD AL-WADIASHI, No. 495
AL-WAHRANI = see, ABDALLAH AL-WAHRANI, No. 397
AL-WATWAT = see, RASHID AL-DIN AL-WATWAT, No. 489
WAYJAN AL-KUHI, No. 277

-Y-

AL-YAFII = see, ABDALLAH AL-YAFII, No. 739
YAISH AL-UMAWI AL-ANDALUSI, No. 931
YAHYA AL-AMRITI AL-AZHARI, No. 1015
YAHYA AL-BATRIQ, No. 53
YAHYA AL-BAYASI, No. 509
YAHYA AL-BIRSHAMSI, No. 1282
YAHYA AL-FARRA, No. 26
YAHYA AL-HALABI, No. 1048
YAHYA IBN ADI, No. 198
YAHYA IBN AJLAN, No. 133
YAHYA IBN ABI MANSUR, No. 31
YAHYA IBN ASAMA, No. 134
YAHYA IBN HAZIL, No. 724
YAHYÂ IBN ḤUSAYN, No. 0282
YAHYA IBN AL-JIAN, No. 930
YAHYA IBN KHAYYAT, No. 360
YAHYA IBN AL-SAMINA, No. 132
YAHYA AL-KHAYYAT, No. 37
YAHYA AL-MUNAJJIM, No. 121
YAHYA AL-RIFAI, No. 883
YAHYA AL-RUAYNI, No. 1006
YAHYA AL-TAKRITI, No. 366
YAHYA NEVI, No. 1043
YANYALI ESAD EFENDİ = see, ASAD EFENDI AL-YANYAWI (YANYALI ESAD EFENDİ), No. 1327
YA'QUB IBN AL-SIKKIT, No. 62
YA'QUB IBN TARIQ, No. 11
YA'QUB IBN SHAMS AL-DIN MUHAMMAD IBN IZZ AL-DIN ALI ABD AL-RAZZÂQ AL-ṬÂWUSI, No. 0283
YA'QUB AL-KINDI, No. 79
YA'QUB AL-MISSISI, No. 225
YA'QOB OF EDESSA, No. 3
YA'QUB AL-QASRANI, No. 95
YA'QUB AL-RAZI, No. 229
YA'QUB AL-SIJISTANI, No. 298
YAQUT AL-RUMI, No. 557
YAQUT IBN UTHMÂN AL-JAKHABÎ, No. 0284
YAZDI = see, MIR HUSAYN YAZDI, No. 901
YAZICIOĞLU AHMED BİCAN = see, AHMAD YAZIJI OGHLU BICAN (YAZICIOĞLU AHMED BİCAN), No. 843
YOSEF IBN WAQAR, No. 721
YUHANNA IBN MASAWAYH, No. 65
YUHANNA IBN YUSUF, No. 204
YUNIS AL-KAZANI, No. 1195
YUNIS AL-RASHIDI, No. 1060
YUSUF BURSAWI (AL-BURUSAVİ), No. 991
YUSUF AL-HARAWI, No. 188
YUSUF IBN MUṢṬAFÂ, No. 0285
YUSUF IBN QURQMAS AL-HAMZAWI, No. 880
YUSUF AL-JUHANI, No. 335
YUSUF AL-JURDI AL-AZHARI, No. 1353
YUSUF AL-KILARJI (AL-KİLARCİ), No. 1341
YUSUF AL-MAHALLI, No. 1042
YUSUF AL-MU'TAMAN, No. 391
YUSUF AL-NABULUSI, No. 1038
YUSUF AL-NAYSABURI, No. 218
YUSUF AL-QARABAGHI, No. 1088
YUSUF AL-QASS, No. 117
YUSUF AL-QITTAJI AL-MIQATI, No. 884
YUSUF AL-RAMADI, No. 289
YUSUF AL-SABTI, No. 555
YUSUF SINAN-PASHA (SİNAN PAŞA), No. 858
YUSUF AL-TAHWAI, No. 0286

-Z-

ZĀHIR AHMĀN, No. 0287
ZAHIR AL-DIN AL-BAYHAQI, No. 471
ZAHIR AL-DIN BABUR, No. 944
AL-ZAHRAWI = see, ALI AL-ZAHRAWI, No. 305
ZAIN Al-ABIDIN HUSAYNI, No. 1110
AL-ZAJJAJ = see, IBRAHIM AL-ZAJJAJ, No. 131
AL-ZAJJAJI = see, ABD AL-RAHMAN AL-ZAJJAJI, No. 177
ZAKARIYA AL-ANSARI, No. 924
ZAKARIYA AL-QAZWINI, No. 624
ZAKARIYA AL-TALBISI, No. 827
ZAKI AL-DIN ABU BAKR ABD AL-WAHHĀB AL-ṢAFRAWI, No. 077
AL-ZAMZAMI = see, ALI AL-ZAMZAMI, No. 878
AL-ZAMZAMI = see, IBRAHIM AL-ZAMZAMI AL-KHALWATI, No. 1373
AL-ZARKASHI = see, SHAMS AL-DIN AL-ZARKASHI, No. 647
AL-ZARQALI = see, IBRAHIM AL-ZARQALI, No. 402
ZAWZANI = see, ASIL AL-DIN HASAN ZAWZANI, No. 611
ZAYN AL- NAJIM, No. 978
ZAYN AL-ĀBIDĪN IBN MUHAMMAD, No. 0288
ZAYN AL-ABIDIN AL-DURRI, No. 958
ZAYN AL-DĪN ABU ABDALLĀH MUHAMMAD IBN MUHAMMAD IBN UMAR AL-FANUKHĪ, No. 0209
ZAYN AL-DĪN ABU'L-ABDALLĀH MUHAMMAD IBN AMR AL-TANUKHĪ AL-MAARRĪ, No. 0183
ZAYN AL-DIN URFA AL-DIMASHQI, No. 941
ZAYN AL-DIN AL-JAWHARI AL-SALIHI, No. 932
ZAYN AL-DIN IBN QUTLUBUGHA, No. 846
ZAYN AL-MILLAT WA'L-DĪN MUHAMMAD HAMADĀNĪ, No. 0193
ZEKI MUSTAFA EFENDI, No. 1165
ZILQ AL-HALABI, No. 1035
AL-ZUBAYR AL-FARADI, No. 455
AL-ZUBAYR AL-THAQAFI, No. 757

INDEX OF WORK TITLES

In this index, the words *kitāb* (book, work), *maqāla* (book, article), *qawl* (reasoning) and *risāla* (treatise, letter) are denoted by their first letters K, M, Q, R and prepositions *fī* and *dar* (on) are not taken into consideration, since in variations of the titles they can be omitted or replaced by another. As much as possible, the Arabic titles are translated into English in a coherent and harmonious way so as not to lose their poetical connotations, however it does not mean that they conform to the style of the English language or the readers' taste. References to the books and papers are indicated by the figures in brackets; and by abbreviations for the most important reference books, encyclopaedias, and catalogues of books.

-A-

(K.) (M.)(R.)(-yi) (dar) (fī'l-)Ab`ād-i ajrām A1. of No 053; A10. of No 308; A3. of No 205; A2. of No 223; A8. of No 46; AG1. of No 938; A14. of No 938

K. fī'l-Ab`ād wa'l-Ajrām; A5. of No 194

R. dar Ab`ād u ajrām u `ajāib-i bilād; Mashhad (Imam Riza 79)

R. fī ab`ād masāfāt al-Aqālīm; G2. of No 79

R. fī `adad al-wafq; M26. of No 103

Fī'l-Ab`ād al-ẓāhira li'l-Ajrām al-samāwiyya; A12. of No 317

Abda` al-yawāqīt `alā Taḥrīr al-mawāqīt; A1. of No 1360

Abḥāth min imlā-yi `Izz al-Dīn al-Ḥusaynī; A1. of No 0126

R. ilā Abī `Alī Naẓīf ibn Yumn al-Mutaṭabbib fī `amal muthallath ḥādd al-zawāyā min khaṭṭayn mukhtalifayn; M26. of No 296

R. ilā Abi'l-Ḥusayn Muḥammad ibn `Abd al-Jalīl fī khawāṣṣ al-shakl al-mujassam al-ḥadith min idārat al-qaṭ` al-zā'id wa'l-mukāfī' = K. fī khawāṣṣ al-mujassam al-nāqiṣ wa'l-zā'id wa'l-mukāfī; M23. of No 296

R. ilā Abī Muḥammad ibn `Alī al-Ḥāsib fī'l-`Amal bi'l-Asṭurlāb al-musarṭan; A10. of No 296

R. Abī Sahl al-Kuhī; A4. of No 277; Me1. of No 251; M47. of No 296

K. ilā Abī Sa`īd; M9. of No 348

R. ilā Abī `Umar ibn Muḥammad ibn Isḥāq fī jawāb mas'ala ṭarīfa min ḍarb al-ka`bayn min jihatay al-handasa wa'l-`Adad; M48. of No 296

K. Abu'l-Ḥasan Thābit ibn Qurra fī ālāt al-sā`āt allatī tusammā rukhāmāt; A1. of No 251

Abwāb lā yastaghnī man yarūmu `amal al-Asṭurlāb `anhā; A3. of No 281

Fī a`ḍā` al-insān; ME2. of No 180

Fī'l-`Adad; M1. of No 226

`Aḍad al-bāzī fī'l-qaṣāṣ al-Rāzı; A1. of No 751

R. dar A`dād-i handasiyya; Tashkent (Institute for Oriental Studies 2245/12.)

K. fī'l-`Adad al-hindī wa a`mālihī; Rome (Vatican 1139/7)

A`dād mutaḥābba; M2. of No 1161

M. fī'l-A`dād al-mutaḥābba wa khawāṣṣihā; M1. of No 88

A`dād wa awfāq; M5. of No 698

M. fī'l-`Adad wa'l-iḍāfa = K. fī tabyīn anna li'l-`Adad wa'l-iḍāfa dhātayn mawjūdatayn fī'l-A`dād; PH4. of No 198

R. fī'l-`Adad wa'l-ma`dūdāt; M1. of No 45

(M.)(R.) (fī)(dar) A`dād(-i) (al-)wafq; M1. of No 014, M43. of No 328; Tehran (Malik 5799/5.).

`ādāt al-nujūm; A1. of No 575

al-Adilla fī ithbāt al-Ahilla; A1. of No 726

Adlā`-i muthallathāt; M1. of No 1390

R.-yi Adwār; A16. of No 317

Adwār al-Anwār mada al-duhūr wa'l-Akwār; A6. of No 635

K. al-Adwār fī `ilm al-mūsīqā; Mu1. of No 641

Fī'l-Adwiya al-qalbiyya; ME2. of No 317

R. al-Āfāqiya fī'l-`Amal bi'l-Nisba al-Sittiniya; A4. of No 945; A1. of No 912

K. al-Aflāk A1. of No 233; Leipzig (820/1.); Princeton (Yehuda 3171b.)

R. Aflāṭūniyya; Ph1. of No 934

K. fīmā aghfala Thāūn fī ḥisāb kusūf al-shams wa'l-qamar; A21. of No 103

K. fī aghrāḍ kitāb al-Majisṭī; A4. of No 174

Aghrāḍ K. mā ba`d al-ṭabī`a; PH10. of No 180

Aghrāḍ (M.) (K.) Uqlīdis; Istanbul (Süleymaniye AS 2713/3 = Fatih 3387/2 = Kılıç 675/4.); Paris (2457/9.); Tehran (Sipahsalar, 690 = Istanbul SM, AS, 2413/3, Fatih 3383/6, Kılıç 675/4)

Aghrāḍ maqālāt Uṣūl Uqlīdis; Tehran (Sipahsalar 267) = Istanbul (SM, AS 2713/3)

K. al-Aghshāsh al-kabīr wa ṣinā`at al-ḥisāb al-kabīr; M2. of No 100

R. al-`Ahd; PH15. of No 317

R. Aḥdāth al-jaww; Mt1. of No 135

K. al-Aḥkām; A1. of No 7

Aḥkām-i A`wām; A5. of No 687

R. fī Aḥkām al-burūj wa'l-kawākib wa ma`rifat awāil al-sinīn; A1. of No 554

al-Aḥkām al-Juz'iyya; A10. of No 635

(K.) (R.)(Fī) Aḥkām (-i) (al-) nujūm; A17. of No 88; A9. of No 308; A4. of No 696; A8. of No 1006; Rasht (Public A 1059)
K. fī Aḥkām al-nujūm wa ittiṣālātihā; A7. of No 88
K. Aḥkām al-qirānāt wa'l-kawākib wa'l-burūj al-ithnay `ashara; A6. of No 88
R.-yi Aḥmad-i Mi`mār; M1. of No 1106
R. ilā Aḥmad ibn al-Mu`taṣim fī anna al-`Anāṣir wa'l-jirm al-Aqṣā kuriyyat al-shakl; M4. of No 79
Aḥsan al-taqāsīm fī ma`rifa al-Aqālīm; G1. of No 215
K. Aḥwāl al-kawākib wa `adad al-daraj wa asmā'ihā; A4. of No 9
Ā`īn-i Akbarı; E1.of No 1047
Āīna-yi Iskandarı; A2. of No 898
Ā'īn-i siyāq; M1. of No 1172
`Ajā`ib al-Āthār fī'l-tarājim wa'l-Akhbār; H1. of No 1381
Ajā'ib al-buldān; AG2. of No 938; Tashkent (Institute for Oriental Studies 2373, 4524/1)
`Ajāib al-dunyā; G1. of No 529
`Ajā'ib al-makhlūqāt; AG2. of No 843
(K.) `Ajāib al-makhlūqāt wa gharāib wa al-mawjūdāt; AG1. of No 517; AG1. of No 518; E1. of No 624
`Ajā'ib al-ṭabaqāt; AG1. of No 1157
K. al-Ajdhār; M5. of No 309
R. fī `ajīb al-jirm al-Aqṣā li'l-bariyya; Ph11. of No 79
Ajnāh al-Najāḥ; A10. of No 933
Ajniḥat al-ghurāb fī ma`rifat al-farā'iḍ wa'l-ḥisāb; M2. of No 947; M2. of No 1313
R. al-Ajrām al-Samāwiyya; A5. of No 317; A3. of No 1044
Ajrām samāwiyya fī'l-muqaddimīn. Nubadh min gharāib al-handasa; St. Petersburg (Institute of Oriental, B 2999/6)
Ajsām nāriyya wa muthalathāt kuriyya; M2. of No 1407
Ajwiba 'an `Asharat masā'il; PH2. of No 317
al-Ajwiba al-Ghazzāliyya; PH2. of No 415
Ajwiba `an masā'il saalahū `anhā ba`ḍ muhandisī Shīrāz; M21. of No 296
al-Ajwiba al-mu`allala fī'l-masā'il al-mujahhala; M1. of No 993
Ajwiba `an sab`at masā'il ta`līmiyya su'ila `anhā bi-Baghdād; M11. of No 327
Ajwiba al-Sheikh al-Ra'īs `an masā'il Abī'l-Rayḥān al-Bīrūnī; PH1. of No 317
K. al-Ajwiba wa'l-As'ila li-taṣḥīḥ samt al-Qibla; G12. of No 348
R. fī Ajzā` khabariyya fī'l-mūsīqā; Mu3. of No 79
R. fī Akhbār ab`ād al-Ajrām; A18. of No 79
Akhbār al-Aṭibbā; HS2. of No 80
Akhbār al-munajjimīn; HS1.of No 80
K. al-Akhbār al-ṭiwāl; H1. of No 97
K. fī Akhdh al-Ab`ād; M1. of No 337; M1.of No 351
R. fī Akhdh al-irtifā` bi'l-rub`; A2. of No 990
Akhlāq-i Jalālı; PH1. of No 894
Akhlāq-i Muḥsinı; PH1. of No 898
Akhlāq-i Nāṣirī; PH1. of No 606
al-Akhlāq wa'l-infī`ālāt al-nafsāniyya; PH9. of No 317
Akhṣar al-mukhtaṣarāt `alā rub` al-muqanṭarāt; A12. of No 1367
`Aks al-marāyā fī akhdh al-zawāyā; A1. of No 1407
R. fī'l-Āla al-muḥriqa; Ph2. of No 302
R. `Alā'l-Āla al-musammāt bi dā'irat al-mu`addal; A7. of No 842
R. fī'l-Āla al-musammāt dhāt al-kursī = R. fī dhāt al-kursī = R.-yi kursı; A2. of No1336
R. al-'āla al-Sarrājiyya fī istikhrāj al-A`māl al-'āfāqiyya; A6. of No 732
K. al-Āla al-shāmila, K. al-Āla al-`Āmma; A1. of No 269
al-`Alāiyya; M1. of No 718
al-R. al-`Alā'iyya fī'l-masāil al-ḥisābiyya; Istanbul (Süleymaniye AS 2737)
R. fī'l-`Ālam al-Aqṣā; A20. of No 79
al-`Alam al-manshūr fī ithbāt al-shuhūr; A3. of No 726
K. al-A`lāq al-nafīsa; E1. of No 112
al-Ālāt al-`Ajība al-raṣadiyya; A1. of No 194
Ālāt al-Asṭurlāb; Istanbul (Süleymaniye, Fatih 3439/18)
R. fī'l-Ālāt falakiyya wa'l-jayb; (Cambridge University, Sup. 656)
Ālāt-i ma`rifat-i sā`āt; Tehran (University, Adab. 328/8)
R. fī ālāt al-raṣad; A4. of No 938
(R.) (dar) Ālāt(-i) (al-) rasādiyya; A3. of No 317; A1. of No 1014
Ālāt-i raṣadiyya li-Zīj-i Shāhinshāhiyya; Cairo (Fadil riyad. 40/3)
K. fī ālāt al-sā`āt allatī tusammā rukhāmāt; A4. of No 103
Ālāt al-taqwīm; A4. of No 592
K. fī ālat al-zamān; A24. of No 103
K. fī ālat al-ẓill; A4. of No 327
R. al-Albāb fī'l-Asṭurlāb; Istanbul (Süleymaniye AS 2618)
al-Alfāz al-mūjaza fī'l-waḍ`iyya bi'l-handasa; A3. of No 1340
K. al-Alfāẓ al-musta`mala fī'l-manṭiq; PH9. of No 180
R. al-`Aliyya fī'l-masāil al-jaybiyya; Istanbul (Süleymaniye, Laleli 2729)
K. al-Alwān; Ph1. of No 77
al-Amad al-Qawīm fī ḥall al-taqwīm; A1. of No 1037
R. fī `Amal al-Ahilla bi ṭarīq al-jadāwil; A2. of No 856
R. fī `Amal al-Ahilla bi'l-ḥisāb; A3. of No 856

K. fi'l-`Amal bi'l-Āla al-falakiyya al-ma`rufa bi-dhāt al-ḥalaq; A1. of No 265

M. fi `amal al-Āla li-ma`rifat ru'ya al-Ahilla; A3. of No 181

R. fi'l-`Amal bi'l-Āla al-mujannaha = K. fi rub` al-mujannah; A6. of No 715

Amal āla li-qiyās al-kawākib al-thābita; Damascus (al-Zahiriyya 4871)

al-`Amal wa'l-Alqāb fi ma`rifat al-Asṭurlāb; A1. of No 409

R. dar `amal-i ashkāl mutasāwiyya al-Aḍlā`; M1. of No 212

R. fi `amal `aṣā' Sharaf [al-Dīn] al-Ṭūsī; A1. of No 576

R. fi'l-`Amal bi ālat al-Asṭurlāb wa'l-ḥisāb; A1. of No 0186

(K.) (R.)(-i)(-yi) (fi'l-)(al-)A`mal(-i) (bi'l-) (al-) Asṭurlab; A3. of No 9; A5. of No 27; A2, A3. of No 41; A9. of No 46; A1. of No 47; A3. of No 67; A11. of No 74; A2. of No 212; A2. of No 233; A14. of No 296; A1. of No 310; A1. of No 312; A1. of No 325; A12. of No 348; A1. of No 431; A2. of No 592; A1. of No 689; A3. of No 797; A40. of No 873; A2. of No 951; A12, A32. of No 990; Sarajevo (Ghazi Husrev Beg 551/6); Berlin (State 5807); Berlin (State 5809); Istanbul (Süleymaniye, Laleli 2761/3); Princeton (Yehuda 861.); (Vienna, 338); (Vienna 1209/16.); Istanbul (Süleymaniye AS 2671/9.); (Institute of Oriental Studies A 686)

K. fi'l-`Amal bi'l-Asṭurlāb al-kurawī; A1. of No 135

R. dar A`māl-i kura; Hyderabad (Sa`idiyya Hay'a 16)

(K.) (R.) (fi'l-)(al-)`Amal bi'l-Asṭurlāb al-kurī; A1. of No 116; A2. of No 118

al-`Amal bi'l-Asṭurlāb al-kurī wa `ajāibuhū; A5. of No 46

K. `amal al-Asṭurlāb al-mubaṭṭaḥ; A1. of No 86

R. fi'l-`Amal bi'l-Asṭurlāb al-mughnī; A2. of No 737

R. fi'l-`Amal bi'l-Asṭurlāb al-musarṭan; Istanbul (Topkapı Sarayı 3509/3)

K. al-`Amal bi'l-Asṭurlāb al-musaṭṭaḥ; A3. of No 6

R. fi'l-`Amal bi'l-Asṭurlāb al-shimālī; Berlin (State 5811/1)

K. al-`Amal bi'l-Asṭurlāb `alā ṭarīq al-mas'ala wa'l-jawāb; Oxford (Bodleian I 941/5)

Fī `amal al-Asṭurlāb wa'l-`Amal bihī; A2. of No 281

K. al-`Amal bi'l-Asṭurlābāt dhawāt al-ḥalaq; A4 of No 6f

R. A`māl al-Awqāt fi istikhrāj al-sumūt; A43. of No 873; Manchester (Rylands 369/D)

R. A`māl al-Awqāt fi istikhrāj al-sumūt wa'l-jihāt; A1. of No 02

A`māl al-Awqāt bi'l-rub` al-mujayyab; Tehran (Sipahsalar 261)

`Amal al-bankān alladhī yusamma al-bunduqiyya; A12. of No 41

`Amal al-bankān wa huwa al-ṭughār wa-huwa al-bāss li'l-sā`āt al-musta-wiyya wa'l-mu`wajja; A11. of No 41

R. fi `amal al-basīṭ wa ashkāliha; Princeton (Garr. 1030)

M. `ala `amal al-basīṭa al-musammāt bi'l-rukhāma bi ṭarīq al-handasa; A28. of No 888

`Amal bi'l-bayḍa wa'l-kura; A1. of No 129

M. fi `amal al-binkām; Me1. of No 328

R. fi `amal al-birkār al-makhrūṭī bi-ṭarīq ṣinā`ī; M50. of No 296

K. `amal al-burhān al-makhrūṭī; M43. of No 296

K. `Amal al-Dā'irat al-Maqsūma bi Sab`at Aqsam Mutasāwiya; M1. of No 1348

R. fi'l-`Amal bi dāirat al-mu`addil; Paris (National 4686/6)

R. fi'l-`Amal bi-dā'irat al-mu`addil fi'l-balad jamī`hā wa kayfiyyat istikhrāj al-ḥiṣas wa'l-A`māl; Princeton (Garr. 1025)

M. fi `amal dā'ira nisbatuhā ilā dā'ira mafrūḍa ka nisba mafrūḍa; M7. of No 341

R. fi'l-`Amal bi daqāiq ikhtilāf al-Āfāq al-mar'iyya; A34. of No 750

R. fi a`māl al-ḍarb; Tehran (University 833/1)

R. fi a`māl dhāt al-kursī; Princeton (Yehuda 4296. 4477)

al-`Amal bi-dhāt al-Āfāk; Rome (Vatican Borg. 217/4a)

K. al-`Amal bi dhāt al-shu`batayn wa ghayrihā; A1. of No 147

K. (fi) (al) ('l-)`amal bi dhāt al-ḥalaq; A2. of No 70; A3. of No 233

R. fi `amal ḍil` al-musabba` al-mutasāwī al-Aḍlā` fi'l-dā'ira; M10. of No 277

`Amal dūlāb al-sā`āt; A13., A12. of No 41

al-A`māl al-Falakiyya; A2. of No 1223

A`māl falakiyya bi'l-rub` al-mujayyab; A2. of No 1332

R. fi `amal al-ḥalaq al-sitta wa isti`māliha; A21. of No 79

M. fi `amal irtifā` suds sā`a li arḍ Madīnat al-salām; A4. of No 31

`Amal al-irtifā` wa'l-sumūt; A4. of No 239

R. fi a`māl al-jabriyya wa'l-misāḥiyya; Fas (Zawiya 9k.).

R. fi'l-`Amal bi'l-jadāwil al-musammiyya bi'l-shabaka; A1. of No 775

R. fi'l-`Amal bi'l-jayb al-ghā'ib; A4. of No 737; Cairo (Mīqāt 568/2)

R. fi'l-`Amal bi jayb al-thumn; A27. of No 842

R. fi'l-`Amal bi kitāb al-Durr al-yatīm fi tashīl ṣinā`at al-taqwīm; A20. of No 815

R. fi' l-`Amal bi'l-Kura al-Musammāt bi Dhāt al-Kursī; A3. of No 893

K. (fi) ('l-)'amal bi'l-kura; A22. of No 103; Oxford (Bodleian I 941/7)
K. al-`Amal bi'l-kura al-falakiyya; A3. of No 212
R. fi'l-`Amal bi'l-kura; Tripoli (Waqfs T 25/14)
K. fi a`māl al-layl wa'l-nahār; Oxford (Bodleian I 941/4)
K. `amal al-marāyā al-muḥrika; Ph1. of No 233
R. fi `amal al-mawlid al-raṣadī; Oxford (Bodleian I 941/2)
`Amal al-miknasa; A15 of No 41
M. fi `amal mukhammas fi murabba`; M41. of No 328
R. fi `amal mukhammas mutasāwī al-Aḍlā` fi murabba` ma`lūm; M21. of No 277
`Amal al-mukḥula li'l-sā`āt; A14. of No 41
R. fi'l-`Amal bil-muqa`ar; A15. of No 842
R. fi'l-`Amal bi'l-murabba`; A10. of No 764; A30. of No 750
K. `amal al-murabba` al-musāwī li'l-dā'ira; M1. of No 1327
R. fi'l-`Amal bi'l-muthallath; A26. of No 842; Manchester (Rylands 361/H.)
M. fi `amal al-musabba` fi'l-dā'ira; M13. of No 328
`Amal al-musabba` fi'l-dā'ira wa qismat al-zāwiya al-mustaqīmat al-khaṭṭayn bi-thalāthat aqsām mutasāwiyya; M4. of No 296
K. fi `amal al-musabba` fi'l-dā'ira; M2. of No 342
M. al-`Amal al-musabba` fi'l-dā'ira wa qismat al-zāwiya bi-thalāthat aqsām mutasāwiyya; M5. of No 296
K. `amal al-musabba` wa ghayrihī min dhawāt al-Aḍlā` al-kathīra fi'l-dā'ira; M2. of No 1291
al-`Amal al-Muṣaḥḥaḥ bi al-Rub` al-Mujannah; A31. of No 888; Damascus (al-Zahiriyya 3111)
K. fi `amal al-nayyirayn; A2. of No 77
K. `amal niṣf al-nahār bi-qaysa wāḥida bi'l-handasa; A3. of No 68
R. fi'l-`Amal bi'l-qamar idhā al-najm bi'l-ghaym istatar; A46. of No 873
R. fi `amal āla min qibal al-nujūm; Princeton (Garr. 75)
R. fi `amal al-qirāṭ; M18. of No 783
(K.)(R.) (fi'l-)`Amal (bi)('l-) rub`; A7. of No 732; A10. of No 873; Madras (Mulla Firuz 86/4)
R. fi `amal al-rub` al-Āfāqī; A1. of No 033
R. fi'l-`Amal bi rub` al-dā'ira al-mawḍū ` `alayhi al-muqanṭarāt; Berlin (State 5862)
R. fi'l-`Amal bi rub` al-dā'ira al-mawḍū ` fihi al-juyub; A13. of No 903
R. fi'l-`Amal bi'l-rub` al-hilālī; A22. of No 750; Cairo (Mīqāt 138/I)
R. fi'l-`Amal bi'l-rub` al-jāmi`; Cairo (Khalil mīqāt 10/10)
R. fi'l-`Amal bi rub`ay al-jayb wa al-muqanṭarāt; A7. of No 797
R. fi'l-`Amal bi rub` al-jayb = R. `Alā al-rub` al-mujayyab; A3. of No 983
R. fi `amal rub` al-juyūb = R. al-mujayyab; A1. of No 1338
R. fi'l-`Amal bi rub` al-juyūb; Paris (5014)
R. fi'l-`Amal bi'l-rub` al-maqṭū` al-shimālī; Jerusalem (National and University, Yehuda 831.).
R. fi'l-`Amal bi'l-rub` al-maqṭū`; A7. of No 815
Fī `amal al-rub` al-maqṭū`; A2. of No 1042; Paris (2546/4)
R. fi'l-`Amal bi'l-rub` al-marsūm `alayhi al-muqanṭarāt; A3. of No 815
R. fi al-`Amal bi'l-rub` al-marsūm bi'l-muqanṭarāt; Princeton (Yehuda 4974)
R. fi'l-`Amal bi'l-rub` al-maṭwı = R. fi'l-`Amal bi rub` al-dā'ira al-mawḍū ` `alayhi al-muqanṭarāt al-maṭwiyya; A7. of No 715
R. fi'l-`Amal bi'l-rub` al-mughnı; A5. of No 727
R. fi'l-`Amal bi'l-rub` al-mujannaḥ fi `ilm al-falak, al-`Amal al-muṣaḥḥaḥ bi'l-rub` al-mujannaḥ; A9. of No 888
R. (Fī) `Amal (bi) (l')rub` al-mujayyab; A9. of No 903; A1. of No 1281; Istanbul (Topkapı Sarayı 3509/5.); St. Petersburg (National 130/4.); A5. of No 775; A10. of No 903; A3. of No 829; A5. of No 815; A8. of No 873; Berlin ((IGMN)II. 12.); Berlin (State 5822.); Berlin (State 5823.); Berlin (State 5830.); Berlin (State 5833/1, 5833/2.); Istanbul (Süleymaniye, Laleli 2724/2.); Princeton (Yehuda 4350.); St. Petersburg (Institute of Oriental Studies B 1296.); St. Petersburg (Institute of Oriental B 3691/2.); A2. of No 0239; A35. of No 990; A19. of No 990; A3. of No 987.
R. (Muhadhdhab) dar `amal-i rub`-i mujayyab; A6. of No 940
R. fi'l-`Amal bi'l-rub` al-mujayyab al-Āfāqī; A18. of No 842
R. fi'l-`Amal bī'l-rub` al-mujayyab min ghayr murī; A1. of No 0176
R. dar `amal bi'l-rub` al-mujayyab mushtamila; Rasht (Public Majami` 71/5)
Fī'l-`Amal bi'l-rub` al-muqanṭarāt; Rasht (Public Majami` 71/13)
R. dar `amal bi-rub`-i muqanṭar; A2. of No 048
R. fi'l-`Amal bi rub` al-muqanṭarāt; A2. of No 732; A11. of No 808; A5. of No 1008; A5. of No 797; Berlin (State 5861.); Istanbul (Süleymaniye, Laleli 2728/3); Princeton (Yehuda 4757); Berlin ((IGMN)II. 5.); Cairo (Fadil mīqāt 144/3 = Taymur mīqāt 79/4.); Istanbul (Süleymaniye, Laleli 2714/3).
R. fi'l-`Amal bi rub` al-muqanṭarāt al-shimāliyya; A1.of No 827
R. (fi'l-) al-`Amal bi rub` al-musattar; A3. of No 732; A8. of No 715
al-`Amal bi rub` al-sā`āt; A16. of No 41

R. fī al-`Amal bi al-Rub` al-Shakāzī; A19. of No 1004
R. fī'l-`Amal bi rub` al-shakāziyya; A8. of No 775; A1. of No 762; A31. of No 750; Princeton (Yehuda 3792), Paris (2544/2)
R. fī'l-`Amal bi'l-rub` al-tāmm = R. al-rub` al-mujayyab; A15. of No 750
A`māl al-Rukhāma bi'l-handasa; M7. of No 79
K. `amal al-rukhāma al-munḥarifa; A1. of No 239
K. `amal al-rukhāma al-muṭabbala; A2. of No 239
R. fī `amal al-rukhāma al-tabsīṭiyya; Paris (5311/2)
K. `amal al-rukhāmāt; A8. of No 67
`Amal al-sā`āt fī basīṭ al-rukhāma; A20. of No 41
`Amal al-sā`āt al-mabsūṭa bi'l-handasa fī ayy iqlīm aradta; A1.of No 68
R. fī `amal al-sā`āt `alā safīha tunṣabu `alā'l-saṭḥ al-muwāzī li'l-ufq khayr min ghayrihā; A4. of No 79
K. fī `amal al-sā`āt wa isti`mālihā; Me1. of No 562
R. dar `amal-i ṣafīhayi āfāqī; Rampur (Rada 3010)
R. (fī)al-`Amal bi'l-ṣafīḥa al-Āfāqiyya; Oxford (Bodleian I 941/3.); A2. of No 485; A11. of No 296
R. fī'l-`Amal bi'l-ṣafīḥa al-Āfāqiyya dhāt al-janūb; Istanbul (Topkapı Sarayı 3509/4)
R. fī'l-`Amal bi'l-ṣafīḥa al-Āfāqiyya al-musammāt al-jāmi`a; Cairo (Mīqāt 1001)
R. fī'l-`Amal bi'l-ṣafīḥa al-`Ajamiyya; A1. of No 1137
R. `Amal al-ṣafīḥa al-jāmi`a; Oxford (Bodleian I 941/9)
R. fī'l-`Amal bi'l-Ṣafīḥa al-qamariyya wa'l-ḥuqq[a] al-kusūfiyya; A3. of No 47
R. fī'l-`Amal bi'l-ṣafīḥa al-shakāziyya; Cairo (Zaki 706/1)
R. fī'l-`Amal bi'l-ṣafīḥa al-zarqāliyya; A12. of No 903
K. al-`Amal bi'l-ṣafīḥa al-zījiyya = al-R. al-zarqāliyya fī `amal al-ṣafīḥa mansūba ilayhi wa'l-`Amal bihā= K. al-`Amal bi'l-ṣafīḥa al-zarqāliyya al-mu`adda li jamī` al-Āfāq; A1. of No 402
`Amal al-samt `alā al-kura; M6. of No 79
K. fī `amal shakl mujassam dhī arba`a `ashara qā`ida tuḥīṭu bihī kura ma`lūmā; M15. No 103
R. fī `amal shakl al-muwassaṭayn; M24 of No 79
`Amal si`at ayy mashriq shi`ta min al-burūj fī ayy `arḍ shi`ta bi'l-handasa; A8. of No 41
A`māl sitta ḥisāb; Rawalpindi (Ganjbakhsh 510/181)
R. fī'l-`Amal bi ṣundūq al-yawāqīt; A10. of No 888
K. `amal al-suṭūḥ al-mabsūṭa wa'l-qā'ima wa'l-mā'ila wa'l-munḥarifa; A11. of No 46
al-`Amal fī tamyīz ikhtilāf al-manẓar fī'l-ṭūl wa'l-`Arḍ fī ikhtilāf al-manẓar al-kullī bi'l-jadwal; A9. of No 135
A`māl-i taqwīm kawākib-i thābita; A1. of No 655
Amal thurayyā yūqadu fīhā ithnā `ashara qandīlan fa kullamā māḍat sā`a min al-layl ṭafi`a minhā qandīl; Me2. of No 283
R. fī'l-`Amal bi-wajh al-ṣafīḥa al-zarqāliyya; A1. of No 404
R. fī `Amal āla Yursamu bihā al-Kawākib `alā Saṭḥin Mustawin; A18. of No 1004
K. al-`Amal bi'l-zarqāla; A3. of No 269
Amaliyyāt min kitāb Uqlīdis; Cairo (Fadil riyad. 40/8)
K. al-Amkina al-mughliṭa; PH9. of No 180
R. fī amr al-khaṭṭayn alladhayn aḥaduhumā khaṭṭ mustaqīm wa'l-Ākhar qaṭ` zā'id; M28. of No 296
Fī amr [al-Zīj] al-mumtaḥan wa tabṣīr Ibn Kaysūm al-Muftatan; A25. of No 348
K. al-Amṭār; Mt1. of No 109; Mt1. of No 110
K. al-Amṭār wa'l-riyāḥ; Mt1. of No 18
Fī'l-Amṭār wa'l-rīḥ; Mt1. of No 50
M. fī anna al-Ajrām al-`ulwiyya dhawāt nufūs; A1. of No 0264
M. anfadhahā ilā'l-malik `Aḍud al-Dawla fī'l-Ashkāl dhawāt al-khuṭūṭ al-mustaqīma matā taqa`u fī'l-dāira wa `alayhā; M2. of No 169
Angusht-i shumārı; M1. of No 0108; Tehran (University 944/5, 6. = Tehran Mahdawi 282/21); Tehran (Mahdawi 281/21)
Anīs al-Aḥbāb fī bayān masā'il al-Asṭurlāb; A2. of No 1417
Anīs al-munajjimīn; A2. of No 1010
Anīs al-ṭullāb fī ma`rifat al-Asṭurlāb; A1. of No 0193
(K.) (Fī'l-) al-Anwā' A1.of No 51; A1. of No 120; A1. of No 131; A1. of No 149; A1. of No 16; A1. of No 169; A1. of No 177; A1. of No 19; A1. of No 249; A1. of No 30; A1. of No 62; A19. of No 103; A2. of No 25; A2. of No 94; A8. of No 696; A1. of No 250; A1.of No 40.
R. fī anwā` al-A`dād wa ṭarā'if min al-A`māl mimmā jama`ahā min mutakaddimī ahl al-`ilm bi-hādhihī al-ṣinā`a; M1. of No 205
R. dar Anwā`-i ḥisāb; Tashkent (Institute for Oriental Studies 15/6)
K. al-Anwā' `alā madhhab al-`Arab = Mukhtaṣar min al-Anwā'; A1.of No 280
K. Anwā` al-saḥāb fī anwā` al-ḥisāb; M2. of No 655
K. al-Anwā' wa'l-Azmina wa ma`rifat a`yān al-kawākib; A1. of No 290
Anwār al-ḥikma; PH2. of No 1088
Anwār Khulāṣat al-ḥisāb; M2. of No 171
Anwār-i mu`tamidiyya; M2. of No 1112
R.-yi `Aqd-i anāmil = R. fī bayān ḥisāb al-`Aqd = R. dar ḥisāb al-`uqūd; M1. of No 825
al-`Aqā'id; PH1. of No 437
`Aqāid al-idrāk fī dirāyat al-Aflāk; A5. of No 595
`Aqd al-Anāmil; M1. of No 1113; Hyderabad (Central State Riyad. 31/6)
Aqrābādhīn; ME1. of No 79
Aqrab al-wasā'il fī `amal al-mazāwil; A1. of No 1261
Aqsām al-`ulūm al-`Aqliyya; PH3. of No 317

R.-yi Arḍ-i balad; Oxford (Bodleian Pers. I 75/2 = 1546/2)
R. fi'l-Arithmāṭiqā; M2. of No 318
Ārā' ahl al-madīna al-faḍīla; PH4. of No 180
K. al-Arba`īn fī uṣūl al-dīn; PH5. of No 535
Arba`īn; Mashhad (Imam Riza 9)
Arba`in = Chihil suāl; Tehran (Sipahsalar 140, 631/3)
al-`Arḍ al-kāfī li'l-`Arḍ al-shāfī wa-huwa al-bayān `an umr al-zamān; A1. of No 1097
R. dar Arismātiqī; Tehran (University Ilah. 46/1.); Tehran (University 4888/5); Tehran (Majlis 5389/10)
K. al-Arithmāṭiqā fī'l-A`dād wa'l-jabr wa'l-muqābala; M1. of No 100
al-Arithmāṭiqī fī `ilm al-jafr li ayy raqam; Baghdad (Ya`qub Sarkis 114)
R. dar Arqām-i nujūm; A1. of No 052
Arkān al-falsafa; PH1. of No 100
al-Arkān fī'l-mu`āmalāt `alā ṭarīq al-burhān; M1. of No 305
K. al-Arqām; M21. of No 348
Arqām dar qawmī ki ustādān fī `ilm al-siyāq ta`līm namūdaand; Tashkent (Institute for Oriental Studies 2679/11)
Arqām siyāqa; Istanbul (Millet, Ali Emiri 367)
K. al-Arṣād fī Baghdād; A15. of No 46
al-Arṣād al-kulliyya; A14. of No 317
K. Arshimīdis fī `amal al-sā`āt; London (British, Sup. 23391)
K. Arshimīdis fī'l-dawāir al-mutamāssa; M4. of No 103
`Arūḍ risalası; L1. of No 944
K. al-`Arūs fī'l-`Amal al-maḥfūẓ; A35. of No 873
K. fī'l-As`ār; A1. of No 18
Asās al-Aḥkām al-nujūmiyya; A2. of No 454
Asās al-iqtibās; PH2. of No 606
Asās al-qawā`id fī uṣūl al-Fawā'id; M2. of No 674
Asās al-taqdīs fī `ilm al-kalām; PH5. of No 535
Asbāb-i muhandisīn; Tehran (Sipahsalar 165)
al-Ashi`a al-lāmi`a fī'l-`Amal bi'l-Āla al-jāmi`a; A20. of No 750
Ashjār wa athmār = K. -i shajara-yi thamara; A2. of No 687
al-Ashkāl allatī yajibu an tuḍāfa ilā'l-ukar ḥattā yufhamu al-Majisṭī `alā'l-ḥaqīqa min ghayr taqrīb; M1. of No 512
al-Ashkāl allatī yuḥtāju ilayhā fī tashīl kitāb Abulunyus fī'l-Makhrūṭāt; M2. of No 74
K. al-Ashkāl allatī zādahā fī'l-maqāla al-ūlā min Uqlīdis; M4. of No 43
R. (K.) fī anna al-Ashkāl kullahā min al-dā'ira; M45. of No 296
Ashkāl aṣl fī Taḥrīr Uqlīdis; Hyderabad (Salar Jung Riyad. 2)
K. (fī) ('l-)ashkāl al-handasiyya; M1 of No 75; St. Petersburg (University 90/7)
K. al-Ashkāl wa'l-masā'iḥ; M1. of No 70
al-Ashkāl al-shāhiyya fī'l-`Amal bi'l-muqanṭarāt; A11. of No 715
K. fī'l-Ashkāl al-ṣanawbariyya; London (British Sup. 7473/16)
Ashkāl al-ta'sīs; M1. of No 655; M2. of No 1318; St. Petersburg (Institute of Oriental B 2192, 2565)
Ashkāl al-wasā'iṭ fī rasm al-munḥarifāt wa'l-basā'iṭ; A1. of No 856
al-Ashkālāt; A1. of No 893
As'ila wa Ajwiba 'an Jihāt al-Qibla; A11. of No 1008
As'ila; A3. of No 1143
R. fī Aṣl al-Khārijī Yumkinu fī al-Sufliyayn; A7 of No 845
al-Aṣl al-Mu`addil; A11. of No 933
K. Aṣl al-uṣūl fī ṭabī`at al-burūj wa'l-kawākib wa jamī` ḥalātihā wa dalā'ilihā; A4. of No 93
R. fī asmā' al-Awzān wa'l-makāyil al-shar`iyya; Me1. of No 810
Fī asmā al-burūj; Baghdad (Ya`qub Sarkis 120/2)
Asmā al-mudun wa'l-buldān al-ma`rūfa; G1. of No 67
R. fī asmā rusūm al-Asṭurlāb wa ba`ḍ a`mālihā; Cairo (Mīqāt 573/3 = Fadil majami` 180/3 = Halim mīqāt 19/1 = Tal`at mīqāt 255/2. = Berlin 5810)
R. fī Asmā' al-Rusūm al-Marsūma `ala al-Asṭurlāb al-Ṣimālī; A10. of No 1176
R. fī asmā' al-rusūm al-marsūma `alā al-'āla al-musammāt bi'l-Asṭurlāb al-shimālī dhāt al-ṣafā'iḥ; A8. of No 750
R. fī asmā' shuhūr al-Qibṭ wa'l-Rūm; Baghdad (Ya`qub Sarkis 119/5)
Asnā al-ghāyāt fī `ilm al-mīqāt; A2. of No 1261
Asnān al-miftāḥ; M1. of No 785
K. al-Asrār; A7. of No 18; Ch1. of No 142
al-Asrār fī dawāir dārāt al-Anwār; A1. of No 0286
al-Asrār al-ḥisābiyya wa'l-qawā`id al-ilhāmiyya fī istikhrāj fiḍḍat al-yawm; M2. of No 1253
al-Asrār fī `ilm al-ḥisāb; M1. of No 0285
K. al-Asrār fī ma`rifat aḍlā` al-ḍamāir; A10. of No 88
K. al-Asrār fī natā'ij al-Afkār; Me1. of No 340; Me1. of No 388
(K.) Asrār al-nujūm= al-Asrār al-nujūmiyya; A9. of No 88; Tehran (Dihkhuda 289.); Tehran (University 3383/3)
K. al-Asrār al-sulṭāniyya fī'l-nujūm; A2. of No 576
al-Asṭrūnūmiyyā fī `ilm al-nujūm wa tarkīb al-Aflāk; A1. of No 226
(K.)(al-)(R.)(-i)(-yi)(dar)(fī)('l-) Asṭurlāb; Hyderabad (Central State, Jadid 3290.); Hyderabad (Salar Jung Hay'a 34a, b.); London (British 2818/4.); London (India Office 2256/1.); Patna (Bankipore 1065.); A1. of No 0225; A4. of No 1181; A4. of No 933;

A1. of No 0129; Bodleian (Pers. I 75/3 = 1546/3.); Rome (Vatican 875.); A6. of No 813; A1. of No 817; Istanbul (Nuruosmaniye 2915.); Istanbul (Süleymaniye, Laleli 2716/2, 4, 2726/2.); A1. of No 0137; A1. of No 1196; A1. of No 450; A1. of No 466; of No 665; A2. of No 226; A3. of No 990; A7. of No 977; A9. of No 1332; A1. of No 1312; A1. of No 774; A1. of No 847; A1. of No 870; A1. of No 891; A2. of No 312; A8. of No 1058; A8. of No 348; M6. of No 174; A1. of No 296; A6. of No 1058; Baghdad (Waqfs Sup. 323.); (State 5811/2.); (Kazan University 23.); Mosul (Diwaji 19.); Paris (4686/8.); Princeton (Garr. 1023.); St. Petersburg (Institute of Oriental B 3649.); A1. of No 0161; A1. of No 0185; A1.of No 0102; St. Petersburg (Institute of Oriental B 2695.); (Bratislava University 299, 300.); Aligarh (Muslim University 61/2.); A1. of No 972; A1. of No 0213; A1. of No 0231; A1. of No 087; A3. of No 1078; Asṭurlāb A1.of No 58; A9. of No 1008; A1.of No 1230; A1. of No 0247; Baku (Institute of Manuscripts A 366/6; B 2837/1); Konya (Yusuf Ağa 1042/10.); Oxford (Bodleian Tur. 2211/2).

Asṭurlāb = Mīzān al-ṣafā'iḥ; A4. of No 1080

Asṭurlāb āfāqī; Tehran (University 2092/2)

Asṭurlāb ba rūz; A1. of No 0128

R. al-Asṭurlāb al-ghā'ib wa'l-jayb al-ghā'ib; A1. of No 732

R. dar al-Asṭurlāb ikhtiyārāt; A6. of No 308

Asṭurlāb-ı kashfī; A3. of No 0128

Asṭurlāb-ı kurı; A2. of No 0128

R. fi'l-Asṭurlāb al-khaṭṭī; A2. of No 541

R. fi'l-Asṭurlāb al-ma`rūfa bi'l-`Ashrat fuṣūl; A3. of No 737

Asṭurlāb-i manẓūm; A1. of No 092

(K.) (al-) asṭurlāb (-i) (al-) musaṭṭaḥ A2. of No 86; Tehran (University 830/2)

R. fi'l-Asṭurlāb mushtamila; Rome (Vatican 878)

Asṭurlāb risālasī tarjumasī ; Wroclaw (University 145)

R. fi'l-Asṭurlāb al-saraṭānī al-mujannaḥ; A1. of No 350 ; A19. of No 299

(al-R.) (fi'l-)Asṭurlāb al-shimālı; Tbilisi (L 87, 270); Gotha (1416) = St.Petersburg (Nat. 130/6); Baku (Institute of Manuscripts A 963, B 381/2, 1996/7, 2166/2, 2315/10, 2811/1, 2837/5, 3262/3, 3950, 4129, 4147/3, 4306/5); Mahachqala (Institute of History, Language, and Literature 182/1.); Mahachqala (Institute of History, Language, and Literature 1983/5.); St. Petersburg (National 130/6).

R. fi'l-Asṭurlāb al-tāmm; A20. of No 842

R. al-Asṭurlāb wa `amalihi; A1. of No 035; A1. of No 949; A1. of No 729

R. al-Asṭurlāb wa'l-Asmā al-waqi`a `alayhī; A1. of No 313

K. al-Asṭurlāb wa-kayfiyyat `amalihī wa i`tibārihī `alā'l-tamām wa'l-kamāl; A3. of No 308

R. al-Asṭurlāb wa'l-kura; Istanbul (Süleymaniye, Yahya 243.).

R. fi'l-Asṭurlāb wa ma`rifat al-Awqāt; A2. of No 797

Dar Asṭurlāb wa ma`rifat-i rub`; Rasht (Public Majami` 71/12)

R.-i Asṭurlāb wa masā'il rub` mujayyab; A3. of No 1312

R. fi'l-Asṭurlāb wa'l-rub` al-tāmm; A16. of No 750

R. dar Asturlāb-i zawraqī; Rampur (Rada 3010a)

Asṭurlāb zawraqī; Tehran (Malik 6193/6)

al-R. al-Asṭurlābiyya; A1. of No 715

R. fi'l-Aṣwāb al-khamsa; PH2. of No 79

al-Āthār al-bāqiyya min al-qurūn al-khāliyya; E1. of No 348

K. al-Āthār al-mukhayyala fi'l-jaww al-ḥāditha `an al-bukhār al-mā'ī wa-hiya al-hāla wa'l-qaws wa'l-ḍabāb; Mt1. of No 266

R. fi'l-Āthār al-`ulwiyya; Mt1. of No 541

K. al-Athīr; Ph2. of No 104

K. al-Awā'il; E1.of No 279

R. fi Awā'il faṣl al-qamar; A23. of No 606

Awḍaḥ al-masālik ilā ma`rifat al-buldān wa'l-mamālik; G1. of No 1009

K. fi'l-Awfāq wa rasā'il ukhrā; Istanbul (Süleymaniye, Esat 125)

R. dar Awj-i kawākib; Mashhad (Mawlawi 453/2)

R. fi'l-Awqāt = al-Ṣafīḥa al-jāmi`a li jamī` al-`urūḍ; A1. of No 654

R. fi Awqāt al-`Ibādāt; A24. of No 1004

R. fi Awqāt al-ṣalāt wa samt al-Qibla; A4. of No 1063

R. fi'l-Awqāt wa'l-mawāṣim wa'l-tawkī`āt; A4. of No 1134

R. fi'l-Awqāt al-zamāniyya wa fuṣūl wa darajāt al-shams; A1. of No 1149

K. al-Awqāt; A3. of No 50; A21. of No 88

K. al-Awqāt `alā ithnay-`ashariyyat al-kawākib; A22. of No 88

Awqāt-ı shab u rūz; A1. of No 0216

Awṣāf al-Ashrāf; PH5. of No 606

Awṣar Raze; PH7. of No 633

al-K. al-Awwal fi taqṭī` al-nāqis; M1. of No 268

K. fi awwaliyyat al-`Ālam; A5. of No 74

R. fi'l-Awzān; Me1. of No 79

Awzān; Me1. of No 1213

al-Awzān fi `ilm al-mīzān; Me1. of No 354

K. fi'l-Awzān wa'l-makāyīl = M. fi'l-makāyīl wa'l-mawāzīn; Me1. of No 349

K. fi'l-Awzān wa'l-makāyyīl al-yūnāniyya; Me1. of No 118

(R.) (dar)Awzān (u) (wa) maqādīr; Me1. of No 1310; Tehran (Dihkhuda 20/4); Tehran (Sipahsalar 874/3, 6465/2); Me1. of No 1135
Awzān-i shar`ī; Me1. of No 1058
R. fi'l-Awzān; Me1. of No 885; Hyderabad (Central State Jadid 1447, 4972, 5255)
R.-yi Awzān-i shar`ī u `urfī; Me1. of No 1339
R. fi'l-Awzān wa'l-Aqdār; Me1. of No 1268
M. fī A`ẓām al-khuṭūṭ allatī taqa`u fī qat` al-dā'ira; M47. of No 328
K. fī aẓlāl; A2. of No 174
`Ayn al-hay'a; A2. of No 1213
K. al-Ayyām wa'l-layālī; A2. of No 62
al-Āyyat al-bayyināt fi'l-`Amal bi rub' al-muqanṭarāt; A4. of No 1256
Azhār al-Afkār fī jawāhir al-Aḥjār; Mi1. of No 585
Azhār al-maṭālib fī hay'at al-Aflāk wa'l-kawākib; Berlin (State 5814)
Azḥawiyya; PH14. of No 317
al-R. al-`Aẓīma; Berlin (State 6006)
R. `Aẓīma āfāqiyya fī ma`rifat istikhrāj jamī` al-A`māl min al-nisba al-sittīniyya; Berlin (State 5721)
K. al-Azmina; A1. of No 65
K. al-Azmina wa'l-Amkina; PH1. of No 97; A1. of No 307
al-Azmina wa'l-Anwā'; Istanbul (Süleymaniye, Hamidiye 1446)
Azyāj Fas; (Zawiya 4c)

-B-

Bāb fī `amal balāṭa yu`rafu bihā sā`āt al-nahār `alā al-ḥaqīqa; A4. of No 312
Bāb dar dānistan-i sitārahā; Dushanbe (Institute of Oriental Studies 2001)
Bab fi dhikr akıt al-asṭurlab wa'l-asmā al-wāqi`a `alayhā; Paris (2560)
R. dar bāb-i ḥisābī `amal-i shabaka; M1. of No 1199
Bāb dar ḥisāb-i kusūr; M2. of No 1198
Bāb fī ḥisāb sumūt munḥarifāt 53 janūb bi `arḍ 30; A3. of No 1367
R. dar bab-i isti`māl-i asṭurlāb; A3. of No 1108
Bāb fī ma`rifat al-awqāt allatī yakūnu al-qamar fīhā fawq al-arḍ aw taḥtahā; A6. of No 67
Bāb ma`rifat ḥulūl al-shams fi'l-manāzil; Cairo (Mīqāt 948/3)
Bāb fī ma`rifat khaṭṭ niṣf al-nahār; A5. of No 312
Bāb fī ma`rifat rasm al-`ankabūt li'l-asṭurlāb; Cairo (Tal`at mīqāt 155/7)
Bāb fī ma`rifat samt al-Qibla [bi-madī]nat Qurṭuba; A7. of No 312
Bābur-nāma = Wāqi`āt-i Bāburī; H1. of No 944
R. ilā ba`ḍ aṣdiqā'ihī fī istikhrāj `amal al-muthallath al-mutasāwī al-sāqayn `alā khaṭṭ mustaqīm mu`tān bi-ṭarīq kullī wa bi-muṣādarat kitāb Uqlīdis faqaṭ dūna al-ashkāl; M38. of No 296
R. ilā ba`ḍ aṣdiqā'ihī fi'l-nisba al-mu'allafa; M39. of No 296
R. ilā ba`ḍ ikhwānihī fi'l-suyūf; Mi1. of No 79
R. ilā ba`ḍ al-ru'asā' fi'l-haththʼ `alā `amal al-raṣad al-nujūmiyya; A3. of No 327
Ba`ḍ maqālāt min risālat al-unmūdhaj fi'l-ḥisāb; St. Petersburg (Institute of Oriental B 2878/1)
Ba`ḍ Mulakhkhaṣ Miftāḥ [al-ḥisāb]; Tashkent (Institute for Oriental Studies 2245/7)
Badāī`-i al-ḥisāb; M1. of No 0132
Badāī`-i funūn; M1. of No 1236
R.-yi badāī-yi ma`rifat-i samt-i Qibla; Tashkent (Institute for Oriental Studies 9783)
Badhl al-Naṣīḥa fi'l-`Ilm bi al-Ṣaḥīfa; A4. of No 1340
Badī` al-ḥisāb Rawalpindi Ganjbakhsh (510/259:2)
al-Badī` fi'l-ḥisāb; M3. of No 309
Badr al-ḥisāb; Hyderabad (Central State Riyad. 182)
al-Bāha fī `ilmay al-ḥisāb wa'l-misāḥa; M1. of No 853
R. bahā'iyya; A3. of No 459
al-R. al-bahā'iyya fi'l-ḥisāb; M1.of No 0277
al-K. al-bāhir fī `ilm al-ḥisāb; M1. of No 487
Bahja al-aḥdāq bi-maqāṣid al-awfāq; Istanbul (Nuruosmaniye 2974)
Bahja al-rawāḥ; Tehran (University 839)
Bahja al-ṭullāb fi'l-a`amal bi'l-asṭurlāb; A2. of No 1176
Bahjat al-albāb fī (`ilm) al-asṭurlāb; A2 of No 1312; A1.of No 0116; St. Petersburg (Institute of Oriental Studies B 1450/3)
Bahjat al-muḥādith fī aḥkām jumlat al ḥawādith; A2. of No 1074
Bahjat al-nāẓir fīmā yata`allaqu bi ma`rifat dā'ira al-buldān wa faḍl al-dā'ir; A1. of No 1130
Baḥr al-fawāid fī `ilm al-ḥisāb; M5. of No 589
Baḥr al-ḥisāb; M10. of No 1058
K.-i baḥriyya; AG1. of No 969
R.-yi baḥth dar risāla-yi qawā`id al-musta`malāt bi-ālāt al-asṭurlāb; A1. of No 0287
M. fi'l-baḥth `an al-ṭarīqa al-muta`ārafa al-madhkūra fī kitāb al-āthār al-`ul-wiyya; A41. of No 348
Bahyat al-lubāb fī `ilm al-asṭurlāb; Tashkent (Institute for Oriental Studies 467/5)
R. fi'l-bakhth al-hindī; M1. of No 1035
al-Bāligh fī sharḥ kitāb Uqlīdis; M6. of No 341
K. al-barāhīn; A6. of No 135
R. fī barāhīn a`māl Ḥabash a`māl Ḥabash bi-jadwal al-taqwīm; A4. of No 299
Barāhīn `amal al-khaṭa'ayn; M1. of No 0280

R. fi'l-barāhīn `alā `amal Muḥammad ibn al-Ṣabbāḥ fī imtiḥān al-shams; A8. of No 299
R. fi'l-barāhīn `alā masā'il al-jabr wa'l-muqābala; M2. of No 420
R. fil-barāhīn al-misāḥiyya limā ya`raḍu fi'l-ḥisābāt al-falakiyya; M32. of No 79
M. fi barāhin `alā ṭarīq al-khulf fi anna'l-shams a`ẓam min al-arḍ wa'l-qamar aṣghar minhā; A2. of No 48
Barāhīn kitāb Uqlīdis; M9. of No 296
al-Barāhīn al-wāḍiha al-jaliyya `alā thubūt sayr al-aflāk wa-sukūn al-kura al-arḍiyya; A1. of No 045
al-Bāri` fi aḥkām al-nujūm; A1. of No 353
al-Bāri` fi aḥkām al-nujūm wa'l-tawāli`; A2. of No 273
al-K. al-bāri` al-Madkhal ilā `ilm aḥkām al-nujūm = al-Madkhal ilā `ilm aḥkām al-nujūm; A1. of No 273
al-Barq al-lāmi` fi'l-`amal bi'l-rub` al-jāmi`; A21. of No 750
al-Barq al-sāṭi` fi mukhtaṣar al-Bāri`; A1. of No 908
R. fi basā'iṭ wa'l-munḥarifāt bi'l-ṭarīq al-hindī; Princeton (Yehuda 1116.).
K. al-baṣā'ir fi `ilm al-manāẓir; Ph2. of No 674
al-Baṣa'ir fi `ilm al-manāzir fil-ḥikma; Ph1. of No 718
R. fi'l-basīṭa al-ẓilliyya; A13. of No 842
Basṭ al-ḥisāb; M1. 018
Basṭ al-rāḥa li tanāwul al-misāḥa; M1. of No 097
K. Baṭanjal al-hindī fi'l-khalāṣ min al-amthāl; PH3. of No 348
al-R. al-bāṭiniyya; PH1. of No 1088
Bawādir fawāid al-wasā'il fi nawādir farā'id al-masā'il; M1. of No1336
K. al-bayān; A11. of No 194
Bayān al-Adilla fī ithbāt al-ahilla; A2. of No 726
R. dar bayān-i `amal-i rub`-i mujayyab; Hyderabad (Osmania University 252)
R. dar bayān-i anwā`-i ḥisāb; Tashkent (Institute for Oriental Studies 8830/2)
R. fi bayān ba`ḍ `ulūm al-handasa; Moscow (State 121)
R. fi bayān'ḍābita [fī kayfiyya] `uqūd al-`adad; M1. of No 1125
R. fi bayān al-fuṣūl al-arba`a; Istanbul (Süleymaniye Laleli 2767/2)
Bayān al-ḥikma; M1. of No 538
(R.)(-yi) (dar) bayān-i ḥisāb; M1. of No 0177; Tashkent (Institute for Oriental Studies 2463/9).
Dar bayān-i `illat-i khusūf al-qamar; St. Petersburg (Institute of Oriental Studies B 285)
Dar bayān-i `ilm-i khuṭūṭ-i asṭurlāb; Hyderabad (Central State Riyad. 533); Rasht (Public Majami` 71/8. = Hyderabad riyad. 533)
Dar bayān-i ishtirāk u tadākhil u bayān-i a`dād; Paris (Pers. 772/4)
R. fi bayān iṣṭilāḥāt ahl al-misāḥa; Kazan (University 1203).; St. Petersburg (Institute of Oriental B 2999/3. = Kazan 1203)
R. dar bayān-i istikhrāj-i jayb-i yak daraja; M3. of No 808
R. fi bayān annahu lā yumkinu an yūjada `adadān murabba`ān fardān majmū`humā murabba`; M3. of No 576
Dar bayān-i khāṣiyyāt-i māh; Tashkent (Institute for Oriental Studies 8257/2)
Bayān ma`ānī kayfiyyat al-raṣad al-muḥaqqaq; Oxford (Bodleian I 968)
Bayān maqāṣid al-Tadhkira; A1. of No 652
R. fi bayān masā'il; M3. of No 723
Dar bayān-i muḥāsibāt; Tashkent (Institute for Oriental Studies 2692/13)
R. dar bayān-i misāḥat-i ajsām-i muthallath u murabba` u mudawwar u ghayra; Ashqabad (2537/6)
R. fi bayān muqadddimatayn muhmalatay al-bayan ista`malahā Abulūniyūs fi awākhir al-maqāla al-ūla min al-Makhrūṭāt; M4. of No 576
R. fi bayān musādarat Uqlīdis li-rajul majhūl al-laqab; Berlin (State 5928)
R. fi bayān al-muṣādara al-mashhūra li-Uqlīdis; M2. of No 135
R. fi bayān muṣādarat Uqlīdis li rajul majhūl al-laqab; Istanbul (Süleymaniye Carulla 1502/6.).
Bayān al-nujūm; A2. of No 567
Bayān al-qadr bayna sanat wa shuhūr wa manāzil al-qamar; A1. of No 0210
R. fi bayān qawānīn al-ḥisāb; M1. of No 749; Ashqabad (2537/5)
Dar bayān-i sā`āt-i shab u rūz; A15. of No 88
R. dar bayān-i sayr-i āftāb u māhtāb; Tashkent (Institute for Oriental Studies 2741/1)
Bayān al-ṣinā`āt; Me1. of No 567
Bayān al-sirr al-ghāmiḍ fi rasm dā'irat al-maḥārib; A2. of No 1131
Bayān al-ṣuwar min sanat wa shuhūr wa manāzil al-qamar = Bayān al-ṣuwar – muqaddima fi'l-mīqāt = Bayān al-taḥwīl; Tashkent (Institute for Oriental Studies 2572/38)
R. fi bayān al-ṭafra; Me1. of No 1211
Bayān-i taqsīm-i sā`āt; Madras (Mysore 642)
Bayān taqwīm al-shams wa taqwīm al-qamar; Berlin (IGMN)II. 56)
R. fi bayān al-waqt alladhī taṭlā`u fīhi al-kawākib al-thābita laylan; A1. of No 1160
al-Bayān wa'l-tabyīn; PH1. of No 76
K. bayyana fīhī bi ṭarīq ta`līmī wa madhhab handasī annahū laysa fi khārij kurat al-kawākib al-thābita kura tāsi`a; A4. of No 74
Bidāwat al-ḥussāb fi ṣinā`a al-ḥisāb; M1.of No 751

Bidāyat al-ṭullāb fī `ilm waqt al-yawm bi'l-ḥisāb; A1. of No 1194
Biḥār al-anwār; PH1. of No 1213
Bimā yukhtabaru al-asṭurlāb; Rome (Vatican Barb. 46/4)
Binyat al-ḥisāb = Munyat al-ḥussāb; M1. of No 913
1076 Hicret Yılı Takvimi; A4. of No 1354
Birkar al-ḥilla; A17. of No 41
(R.) (K.) fī birkār al-quṭū`; M1. of No 595; M37. of No 328
Fī'l-birkār al-tāmm wa'l-`amal bihı = K. fī'l-āla allatī tusammā al-birkār al-tāmm; M8. of No 277
R. fī'l-birkār al-tāmm wa kayfiyyat al-takhṭīt bihī; M1. of No 572
R.-yi bīst bāb dar ma`rifat-i asṭurlāb; A14. of No 606
Bīst bāb dar ma`rifat-i taqwīm; Tbilisi (K 59.); A1. of No 973; Tabriz (Milli - National 332/4)
Bīst bāb dar taqwīm = Mukhtaṣar (R.) dar ma`rifat-i taqwīm; A2. of No 938
Bīst bāb fī`amal al-asṭurlāb; A1. of No 489
Bīst u chahār bāb; A3. of No 972
R. fī bu`d al-kawākib; A3. of No 137
al-Budūr al-mushriqāt fī a`māl al-munāsakhāt; M1. of No 1119
Bughyat al-hāsib wa bulghat al-kātib; M5. of No 1074
Bughya al-ḥāsib wa `umdat al-muḥāsib; M3. of No 980
Bughyat al-muhtadī wa ghunyat al-muntahī; M6. of No 865
Bughyat al-multamis fī ta'rīkh rijāl ahl al-Andalus; HS1. of No 513
Bughyat al-Nafs fī Ḥall al-Shams; A3. of No 1052
Bughyat al-rāghib fī sharḥ Murshida al-ṭālib; M1. of No 1011
Bughyat al-sā'il fī waḍ` al-mazāwil; A5. of No 1243
Bughyat al-ṭālib; London (British 408/1)
Bughyat al-Ṭālib al-mustafīd wa `umdat al-rāghib al-mustazīd; M1.of No 792
Bughyat al-Ṭālib al-mustafīd wa mughnī al-ḥāsib al-mufīd = al-Zīj al-Ṣarḥı; A1. of No 1152
Bughyat al-Ṭālib fī istikhrāj al-a'māl falakiyya bi'l-ḥisāb; A10. of No 1243
Bughyat al-Ṭullāb fī `amal b`l-asṭurlāb; A1. of No 831
Bughyat al-Ṭullāb fī `ilm al-asṭurlāb; A1. of No 913
Bughyat al-Ṭullāb fī `ilm al-ḥisāb; M2. of No 1004; M3. of No 1261
Bughyat al-ṭullāb fī'l-`amal bi'l-asṭurlāb; A2. of No 446; A2. of No 1028
Bughyat al-ṭullāb fī'l-`amal bi rub` al-asṭurlāb; A1. of No 829
Bughyat al-ṭullāb wa sharḥ Munyat al-ḥussāb; M2. of No 913
Bughyat al-wu`āt fī ṭabaqāt al-lughawiyīn wa'l-nuḥāt; HS1. of No 896
M. fī'l-buḥūth arba`a al-`ilmiyya `an ṣinā`at al-manṭiq; PH2. of No 198
K. al-bukhalā; L1. of No 76
K. al-buldān; G1. of No 105
Bulghat al-muqtāt fī ma`rifat al-awqāt; A1. of No 1117
Bulūgh al-amal fī kayfiyyat al-istiqbāl; A9. of No 1367
Bulūgh al-ṭullāb fī ḥaqā'iq `ilm al-ḥisāb; M1.of No 218
Bulūgh al-Watar fī al-`Amal bi'l-Qamar; A16. of No 1323
Bulūgh al-watar fī'l-`amal bi'l-qamar; A19. of No 888
K. Buqrāṭ fī'l-aḥwiya wa'l-miyāh wa'l-buldān; G2. of No 103
R. fī'l-burhān `alā `amal Ḥabash fī maṭāli` al-samt fī zījihī; A10. of No 299
K. al-burhān `alā `amal ḥisāb al-khaṭa'ayn; M1. of No 118
M. fī'l-burhān `alā ba'd ṣan'at al-asṭurlāb; A10. of No 194
Burhān ḍarb zāid fī nāqiṣ nāqiṣ wa ḍarb nāqiṣ fī naqiṣ zāid min ṭarīq al-handasa; M1. of No 571
al-Burhān `alā anna al-falak laysa fī ghāyat al-ṣafā; Ph1. of No 302
R. fī'l-burhān al-handasī; M29. of No 296
al-M. fī'l-burhān `alā ḥaqīqat mas'ala waqa`at bayna Abī Ḥāmid al-Ṣaghānī wa bayna munajjimay al-Rayy fīhā munāza`a wa-hiya fī `amal al-asṭurlāb; A13. of No 299
al-Burhān `alā'l-khaṭa'ayn; Tehran (Mu`tamid 215/4)
Burhān ḥisāb al-khaṭa'ayn; Paris (Pers. 772/14)
Burhān al-kifāya; Tehran (University 838)
Burhān al-kifāya = Burhān al-kifāya fī aḥkām al-nujūm; A1. of No 490
Burhān al-kifāya dar ahkām-i nujūm; A1. of No 574
Burhān kitāb Abulunyus fī'l-dawā'ir al-mutamāssa; M53. of No 296
R. fī'l-burhān `alā annahu lā yumkinu an yakūna ḍil`ā `adadayn murabba`ayn yakūnu majmū`uhumā murabba`an fardayn bal yakūnān zawjayn aw [yakūnu] aḥaduhumā zawjan wa'l-ākhar fardan; M3. of No 194
Burhān `alā mas`ala min kitāb Arshimīdis ghayr mā awradahū huwa; M33. of No 296
R. fī burhān mas'alatayn iḥdāhumā tatawaqqafu `alayhi misāḥat basīṭ al-kura wa'l-thāniya fī taksīr al-shakl al-sha-bīh bi'l-mu`ayyan; M3. of No 698
R. fī'l-burhān `alā'l-muqaddima allatī ahmalahā Arshimīdis fī kitābihī fī tasbī` al-dāira wa kayfiyyat ittikhādh dhālika = Fī tasbī` al-dāira; M1. of No 576

R. fi'l-burhān `alā al-shakl alladhī qaddamahu Arshimīdis fī qismatihī al-zāwiya thalāthata aqsām wa lam yabarhin `alayhī; M15. of No 327
M. fihā burhān `alā qawl saṭḥ al-kura arba`at amthāl; M11. of No 1080
Burhān al-rā'id fi'l-jabr wa'l-ḥisāb wa'l-khaṭa'ayn wa'l-handasa wa'l-aqdār wa'l-farā'iḍ; M2. of No 925
K. al-burhān `alā' al-ṣaḥīḥ; H2. of No 349
K. al-burhān `alā ṣan`at al-asṭurlāb; A2. of No 68
al-Burhān `alā'l-shakl al-sābi` min kitāb Banī Mūsā; M7. of No 194
R. burhāniyya; Kazan (University 2751)
R. fi'l-burūj; Tashkent (Institute for Oriental Studies 7822/2)
Burūj ithnā `ashara tafāwutī; Tashkent (Institute for Oriental Studies 7805/3)
Bustān al-fuḍalā'; Tarim (Hills of Yemen, al-Husayn 26)

-C-

Chahār `amal-i ḥisāb; Dushanbe (Institute of Oriental Studies 2220)
Chahil faṣl; Tehran (Sipahsalar 1032, 7416/2)
R.-yi Chakmaqi; Tashkent (Institute for Oriental Studies 2245/3)
Chun ṭarīqa-yi istikhrāj-i jayb-i yak daraja bi taqrīb ma`lūm shud, tariq-i istikhrāj-i an burhān niz irad konam. Wa an du tariq ast: yaqi an ke Sultan Muhandisin Ghiyath al-Din Jamshid al-Kāshī istikhraj karda, wa digar an ke az masanif-i sultan Sa`id Shahid Ulugh Beg, nur marqaduhi, bayan farmuda; M1. of No 816

-D-

Da`āwī Uqlīdis; M8. of No 299
al-Ḍābiṭ fī istikhrāj al-majhūlāt bi'l-a`dād al-mutanāsiba; M1. of No 1206
Ḍābiṭ qawā`id al-ḥisāb; M3. of No 171
Ḍābiṭat ashkāl arba`a; M1. of No 019
R. fi daf` al-ghamm min al-mawt; PH7. of No 317
R. fi daf` maḍārr al-abdān bi-arḍ Miṣr; ME2. of No 369
Daftar-i ḥisāb u misāḥat; Tashkent (Institute for Oriental Studies 2679/1)
al-Dair; M1. of No 081
K. al-dā'ir = K. ghāyat al-intifā` fī ma`rifat al-dā'ir min qibal al-irtifā`; A2. of No 659
K. al-dā'ir wa faḍl al-dāir wa'l-samt min `arḍ daraja ilā `arḍ khamsīna daraja; A2. of No 764
K. al-dā'ir wa faḍlihi; A3. of No 659
K. al-dā'ir wa faḍlihi wa'l-samt; A8. of No 727
R. fi'l-dā'ira al-hindiyya; A1. of No 1064; A1. of No 922; A12. of No 715
Dā'ira hindiyya sharḥī; A3. of No 1272
Dāira-yi hindiyya wa ālāt-i sā`āt; Tehran (Sipahsalar 1386)
R. dāira al-mu`addil; Istanbul (Süleymaniye AS 2626)
R.-yi dāira-yi samt; A1. of No 041
R.(-i) (fi)Dā'irat al-Mu`addil;. A6. of No 977; A2. of No 1367
R. fī dā'irat mu`addil al-nahār; A38. of No 873
R. fi dāirat al-rub` al-mujayyab; A2. of no 450
K. al-dalā'il; A1. of No 288
K. dalā'il al-Qibla; A1. of No 248; A1. of No 449
K. dalāil al-qirānat fi'l-burūj wa ttiṣālāt al-kawākib ba`ḍahā bi ba`ḍ; A8. of No 88
Dalāil al-Qibla = K. al-ma`rifa; AG1. of No 175
Dalā'il-i Firuz-Shāh = Tarjama-yi Barāhı; E1.of No 765
Dalāla al-`āmil bi'l-rub` al-maqṭū` al-shimālī ilā'l-mīqāt wa ḥarakat al-samawāt wa'l-sā`āt al-zamāniyya; Princeton (Garr. 1022)
Dalālat al-āthār al-`ulwiyya `alā al-aḥdāth al-sufliyya; A24. of No 348
Dalālat al-ḥāirīn; PH1. of No 534
K. al-dalīl = al-K. al-jalīl; Ph3. of No 104
Dalīl al-munajjimīn; A1. of No 1286
al-Dalīl al-qawīm `alā ṣiḥḥat jamī` al-taqāwīm; A1. of No 799
Dānish-nāma-yi `Alā'iyya; E3. of No 317
Dānish-nāma-yi jihān; E1. of No 875
K. fi daqā'iq al-makhrūṭāt; M1. of No 427
Daqā'iq al-raqā'iq fī ma`rifat faḍl al-dāir li-sā'ir al-āfāq; Cairo (Fadil mīqāt 203/3)
Daqā'iq İkhtilāf al-Ufuqayn; A15. of No 1004
R. dar dānistan-i taqwīm, [R. dar] ma`rifat-i taqwīm; A1. of No 0125
Dāniyāt al-quṭūf fī `amal ḥisāb al-khusūf; A7. of No 1214
R. al-daraja; A2. of No 1007
R. dar ḍarb u qismat; Tehran (University 889)
M. fi'l-ḍarb wa'l-qisma; M1. of No 644
R. fi'l-dastūr wa kifāyat al-`amal bihī; A1. of No 396
K. al-Daraj; A2. of No 501
K. al-darajāt fi ṭabāi` al-burūj; A2. of No 74
Darajāt al-Warīfa fī Taḥrīr qisiy al-`Aṣr wa `Aṣr Abī Ḥanīfa; A24. of No 1323
K. ḍarb al-Ghubār; M2. of No 642
K. ḍarb al-hindī= K. mukhtaṣar al-hindī = al-K. al-kāfī fī mukhtaṣar al-hindī; M1. of No 411
Darb al-kusūr fi'l-kusūr wa ḍarb al-ṣiḥḥā ḥ fi'l-kusūr; Berlin (State 6007/2)
K. al-ḍarb wa'l-qisma; M18 -. M19. of No 606
al-Dastūr al-`ajīb; A1. of No 0246

Dastur al-`amal wa taṣḥīḥ al-jadwal = Sharḥ-i Zīj-i Ulugh Beg; A1. of No 940
Dastur al-`amal wa taṣḥīḥ al-jadwal; M4. of No 808
Dastur al-`amal-i siyāq = Dastur al-`amal-i naw nawisandagı; M1. of No 1330
Dastur al-albāb fī `ilm al-ḥisāb; M1. of No 711
Dastur fī ma`rifat al-awfāq; Istanbul (Süleymaniye Esat 119)
Dastur-i ḥisāb; M1. of No 1402
Dastur-i ḥisāb-i Jalālı; M1. of No 0276
Dastur-i istikhrāj-i ru'yat-i hilal; Calcutta (Asiatic Society of Bengal Curz. 577/2)
Dastur-i munajjimīn; A1. of No 916
Dastur al-nayyirayn; A16. of No 815
Dastur al-tarjīḥ fī qawā`id al-tasṭīḥ/ al-Dustur al-rājiḥ li Qawā'id al-Tasṭīḥ; A27. of No 1004
Dastur natījat al-muqaddima fī a'māl `ilm al-mīqāt; A22. of No 1243
Dastur taqwīm al-kawākib al-sab`a wa'l-jawzahar wa'l-ahilla wa'l-tawārīkh al-thalātha li sanat 1209; A2. of No 1381
Dastur uṣul `ilm al-mīqāt wa natījat al-naẓar fī taḥrīr al-awqāt; A3. of No 1243
Dastur uṣul al-mīqāt wa natījat al-naẓar fī taḥrīr al-awqāt; Berlin (State 5718)
M. fī'l-ḍaw'; Ph2. of No 328
K. fī ḍaw` al-kawākib; Ph3. of No 328
al-ḍaw' al-lā'iḥ fī uṣul al-tasṭīḥ wa rasm al-ṣafā'iḥ; Cairo (Mīqāt 620/1)
Fi'l-ḍaw` al-qamar; Ph4. of No 328
R. fī Davā'ir al-Shuhur wa Jadāwil anṣāf al-Aqṭār; A3. of No1336
R. fī'l-dawā'ir allatī taḥuddu al-sā`āt al-zamāniyya; A9. of No 299
Davā'ir-i Ijtimā` wa Istikbalin Resm ve Istimali; A3. of No 1348
Dawā'ir `iẓām; Tehran (University Ilah. 185/3)
K. fī'l-dawā'ir al-mutamāssa; M7. of No 174
Dawā'ir al-sumut; A2. of No 247
K. al-dawāir al-thalātha al-mumāssa wa kayfiyyat al-ittiṣāl; M1. of No 46
K. al-dawālīb wa'l-arḥā wa'l-dawā'ir al-mutaḥarrika [bi-]dhātihā; Florence (Lorenzo Medici 282/9 (new 152/9))
K. al-dawr wa'l-waṣāyā; M16. of No 309
Dawr uṭāridı; A1. of No 276
K. al-dhakhīra fī `ilm al-ṭibb; ME1. of No 103
Dhamīma; PH5. of No 512
(R.) (K.) (fī) dhāt al-ḥalaq; A5. of No 79; A1. of No 128; A6. of No 18
R. dhāt al-shu`batayn wa'l-`amal bihā = Ṣifat al-`amal bi'l-āla musammāt dhāt al-shu`batayn = R. fī'l-`amal bi dhāt al-shu`batayn; A1. of No779
Fī dhawāt al-ismayn wa munfaṣilāt; M13. of No 696
Fī dhawāt al-ismayn wa'l-munfaṣilāt alladhī min al-maqāla al-`āshira min kitāb Uqlīdis; M1. of No 181
R. fī dhawāt al-dhanā'ib wa mā dhukira fīhā min `ajāib; A1. of No 77
Dhayl Zād al-musāfir; A7. of No 813
R. fī dhikr al-aflāk wa ḥalaqihā wa `adad ḥarakātihā wa miqdār masīrihā = Mā jama`a Thābit ibn Qurra al-Ḥarrānī fī tarkīb al-aflāk wa ḥalaqihā wa `adadihā wa `adad kull ḥaraka wa'l-kawākib fīhā wa mablagh masīrihā wa'l-jihāt allatī tataḥarraku ilayhā; A13. of No 103
Dhikr al-`amal bi rub` al-muqanṭarāt; A2. of No 727
Dhikr al-`amal bi'l-qisiyy al-jadwaliyya; A3. of No 727
Dhikr al-`amal bi'l-rub` al-mujayyab; A4. of No 727
R. dhikr asbāb al-ra`d wa'l-barq; Ph4. of No 317
Dhikr manāzil al-qamar; Damascus (al-Zahiriyya 7305/2)
al-Dībāj al-marqum fī uṣul `ilm al-nujum; A9. of No 1207
Dībācha-yi sharḥ-i Jaghmīnī; St. Petersburg (National 133/2)
R. fī anna al-ḍil` ghayr mushārik li'l-quṭr; M36. of No 296
Dil pasand; A1 of No 1413
K. al-dīn; PH7. of No 180
K. al-dirham wa'l-dīnār; M1. of No 279
Dīwān; L2. of No 944
Dīwān lughāt al-Turk; L1. of No 395
Dīwān-i pasand; M1. of No 080
Diwān-i ash`ār; L1. of No 393
al-Diya' al-`aqlī fī mawḍu ` al-`ilm al-kullī; PH1. of No 420
Dhikr manāzil al-qamar wa'l-waqā'I` wa'l-mawāsim; St. Petersburg (Institute of Oriental Studies B 816)
R. fī dukhul al-shuhur al-Rumiyya; Baghdad (of Ya`qub Sarkis 119/8)
K. al-durar fī saṭḥ al-ukar = Fī tashīl al-tasṭīḥ al-asṭurlābī wa'l-`amal bi-murakkabātihī min al-shimālī wa'l-janubī; A13. of No 348
K. al-durar wa'l-yawāqīt fī uṣul al-mawāqīt; Cairo (Falak 4031/2)
al-Durar al-fākhirat fī'l-`amal bi rub` al-muqanṭarat fī jamī` al-aqṭār wa'l-jihāt; A1. of No 1193
al-Durar al-muntathirāt fī'l-`amal bi rub` al-muqanṭarāt; A3. of No 842
al-Durar al-saniyya wa'l-natīja al-ḥisābiyya fī ikhrā11j al-ḥiṣaṣ wa ghayrihā wa'l-a`māl bi'l-jadāwil al-sittīniyya; M1. of No 0206
al-Durarī al-sab`; A1. of No 082
Durr al-awqāt; Princeton (Yehuda 2946)
K. durr al-tatwīj bi ta`rīb mu`ammarat al-zīj; A1. of No 1041

K. al-durr al-yatīm fī tashīl ṣinā`at al-taqwīm; A19. of No 815
al-Durr (al-Lu'lu') al-manthūr fī'l-`amal bi rub` al-dastūr; A2. of No 775
al-Durr al-farīd `alā'l-raṣd al-jadīd = al-Durr al-naẓīm fī ṣinā`a al-taqwīm; A2. of No 1243
al-Durr al-gharīb fī'l-`amal bi dā'irat al-tajyīb; A4. of No 732
Durr-i maknūn; AG1.of No 843
al-Durr al-manẓūm fī `ilm al-awfāq wa'l-nujūm; My2. of No 554
al-Durr al-manẓūm wa khulāṣat al-Sirr al-maktūm; A1. of No 1283
al-Durr al-maṭlūb; A1. of No 880
al-Durr al-naẓīm fī tas'hīl al-taqwīm; A1. of No 932
al-Durr al-thamīn fī'l-Ḥukm `alā Taḥāwīl al-Sinīn; A5. of No 1040
al-Durr al-yatīm fī taqwīm al-nujūm = Asnā al-mawāhib li taqwīm al-kawākib; A11. of No 1243
al-Durr fī'l-jayb al-nafīs fī'l-rub` al-mansūb li Idrīs = al-Durr al-manẓūm fī'l-silk al-mujayyab fī `ilm al-rub` al-dā'ira al-mujayyab; A2. of No 1217
al-Durra al-bahā'iyya fī ḥall alfāẓ al-Sakhāwiyya; M1. of No 1366
al-Durra al-bahā'iyya fī waḍ` basā'iṭ faḍl al-dā'ir bi ṭuruq al-handasiyya; A1. of No 1074
al-Durra al-bayḍā' fī aḥsan al-funūn wa'l-ashyā' = Matn al-durra fī `ilm al-ḥisāb wa'l-farā'iḍ; M1. of No 984
al-Durra al-fakhīra; L1. of No 882
al-Durra al-muḍiyya fī sharḥ al-Lum`a al-bahiyya; A7. of No 1017
al-Durra al-muḍiyya fī'l-a`māl al-shamsiyya; A1. of No 1055
al-Durra al-naẓīm fī tashīl al-taqwīm; A12. of No 1004
al-Durra al-saniyya `alā Fatḥ rabb al-bariyya; M2. of No 1366
al-Durra al-tājiyya fī'l-`ulūm al-ḥisābiyya; M1. of No 0199
al-Durra al-tāmma fī'l-hay`a; A2. of No 1058
al-Durra al-Ṭā'iyya fī uṣūl al-arithmāṭīqiyya; M1. of No 1365
al-Durra al-yatīmiyya fī'l-mīqāt; A1. of No 1234
Durra al-misāḥa; M1. of No 875
Durrat al-afkār fī ma`rifat awqāt al-layl wa'l-nahār; A2. of No 769
Durrat al-tāj li ghurrat al-Dibāj; E1. of No 668
Dustūr al-`ajā'ib; E1. of No 1044
Dustūr Yatazammanu Hisāb Kusūf al-Shams wāqi` fī Yawm al-Ithnayn 19 Shaban 934; A35. of No 888
M. -yi duwwum dar ḥisāb-i ahl-i tanjīm; Paris (Pers. 783/1)

-F-

K. fa`altu falā talum; A4. of No 668
Fadhlaka al-ḥisāb; M1. of No 1314; A3. of No 1314
K. faḍīlat `ulūm al-riyāḍiyyāt; AM1. of No 156
Faḍl al-dā'ir; A12. of No 933
R. fī Faḍl Dā'ir wa'l-Basā'iṭ wa'l-Munḥarifāt; A23. of No 1323
R. `alā faḍl al-dā'ir; A2. of No 1160
Faḥriyya dar istikhrāj-i samt-i Qibla; A1. of No 1188
Fā'ida dar a`dād-i aṣamm; Tehran (University 2092/6)
Fā'ida fī'l-`amal bi qaws al-`aṣr al-mawḍū` `ala'l-jayb; A14. of No 903
Fā'ida fī Ashkāli `Uṭarid; A6. of No 845
Fā'ida dar handasa; M1. of No 0261
Fā'ida fī ḥisāb al-munḥarifāt; A14. of No 842
Fā'ida fī istikhraj al-aqārīr bi'l-khaṭa'ayn; M2. of No 887
Fā'ida li-istikhrāj awā'il al-shuhūr wa jamī` al-sanawāt; A1. of No 586
Fā'ida fī khaṭṭ al-ẓill alladhī fī maḥall al-ādhān fī ma'dhanat al-`arus bi'l-jāmi` al-Umawī bi Dimashq; A12. of No 764
Fā'ida `alā al-maqāla al-sābi`a wa'l-thāmina wa'l-tāsi`a; Princeton (Yehuda 358)
Fā'ida fī ma`rifat bu`d awwal `uqd min uqūd al-ibtidā' wa mā yaqūmu maqāmahu fī'l-darari al-khamsa ghayr `Uṭārid wa'l-qamar; A1. of No 1404
Fā'ida fī ma`rifat al-dīnār wa'l-dirham wa naṣb zakāt al-dhahab; M3. of No 887
Fā'ida fī ma`rifat al-dirham wa'l-dīnār wa'l-ashrafī wa'l-mithqāl; M6. of No 815
Fā'ida fī ma`rifat al-qamar fī ayy manāzil; Cairo (Mīqāt 573/2)
Fā'ida fī ma`rifat ṭulū` al-Shi`ra al-Yamaniyya; Cairo (Mīqāt 1108/2)
Fā'ida mufīda fī `ilm al-falak; St. Petersburg (Institute of Oriental Studies B 996/2)
Fā'ida fī'l-nisba; Tehran (University 1751/9)
Fā'ida fī Sharḥ Qiṭ`a fī Jins Khārij al-Qisma; A36. of No 888
Fā'ida fī sharḥ qiṭ`a fī jins khārij al-qisma; M2. of No 888
Fā'ida fī taṭbīq al-rub` bi al-sā`a al-mu`tadila; A11 of No 1384
al-Fakhrī fī ṣinā`at al-jabr wa'l-muqābala; M2. of No 309
(K.)(R.) fī'l-falak; A1. of No 0145; Berlin (State 5727.); Saiwun City (Al-Qaf 27)
K. al-falak al-dawwār li'l-shams al-munayyira wa'l-qamar al-sayyār; A1. of No 1075
al-R. al-falakiyya; M1. of No 752; Hyderabad (Salar Jung Hay'a 3); Hyderabad (Central State Jadid 3751)

al-R. al- falakiyya fī `ilm al-hay'a; A1. of No 1215
R. falakiyya fī ma`rifat al-burūj wa'l-manāzil; Istanbul (Süleymaniye, Laleli 2767/3)
Falsafat Aflāṭun wa ajzā'uhā wa marātib ikhraqihā; PH10. of No 180
Falsafat Arisṭuṭālīs; PH10. of No 180
K. fī fann al-hay'a; A1. of No 1382
Farāiḍ; M1. of No 38, Ashqabad (1668)
R. al-farāiḍ dīnāriyya; Tashkent (Institute for Oriental Studies 2245/18)
K. al-farā'iḍ wa ghayrihī; Mahachqala (Institute of History, Language, and Literature 2319)
Farāiḍ Ibn al-Rashīd; M1. of No 505
al-Farāiḍ `alā madhhab ahl al-bayt; M30. of No 606
K. al-farā'iḍ al-sirājiyya; M8. of No 527
Farāiḍ u zawāyā; Tashkent (Institute for Oriental Studies 9749)
Farhang-i Awrang-Shahī; E2. of No 1263
K. al-farq bayn al-firaq; H1. of No 320
Fī'l-farq bayna ibtidā' al-mudda wa bayna ibtidā' al-ḥaraka; Me2. of No 142
Faṣl fī `amal basīṭa munḥarifa bi'l-handasa; A8. of No 737
Faṣl fī `amal bi-rub` al-muqanṭarāt; Paris (2519/8)
K. al-faṣl bayna'l-rūḥ wa'l-nafs; PH1. of No 118
Faṣl fī `ilm bayān qismat al-manāzil `ala'l-fuṣūl; Cairo (Fadil mīqāt 149/1)
Faṣl fī isti`māl al-asṭurlāb; Tehran (University 1971/4)
Faṣl fī istiwā'āt al-nujūm; St. Petersburg (Institute of Oriental Studies B 996/4)
Faṣl al-maqāl fī mā bayna al-sharī`a wa'l-ḥikma; PH4. of No 512
Faṣl fī ma`rifat al-zawāl wa ziyādat al-ẓill wa nuqṣānihı; St. Petersburg (Institute of Oriental Studies B 1264)
Faṣl fī ma`rifat ḥall al-taqwīm `alā sabīl al-ijmāl; Cairo (Mīqāt 602)
Faṣl fī ma`rifat istikhrāj al-mawāqi` al-shimāliyya wa'l-janūbiyya; Berlin (State 5730/1)
Faṣl fī ma`rifat kayfiyyat taqwīm `Uṭārid min al-Durr al-yatīm; A1. of No 1210
Faṣl fī ma`rifat manāzil al-qamar; Cairo (Fadil mīqāt 142/5)
Faṣl fī ma`rifat mughīb al-qamar wa ṭulū`ihī taqrīban fī kull yawm; A1. of No 884
Faṣl fī ma`rifat waḍ` qaws al-`aṣr fī munḥarifāt min wāḥid ilā tis`īn li `arḍ 30; A4. of No 659
Faṣl fī makth al-qamar; A3. of No 709
Faṣl fī masāil uqlīdisiyya min al-maqāla al-thāniya; Paris (Pers. 772/13)
K. al-faṣl fī'l-milal wa'l-ihwā' wa'l-niḥal; PH1. of No 374
al-Faṣl fī takhṭīṭ al-sā`āt al-zamāniyya fī kull qubba aw fī qubba yusta`malu lahā; A3. of No 135
Faṣl fī tartīb shuhūr al-Rūm wa qismatiha; Leipzig (830/4)
Faṣl fī'l-munḥarifa bi'l-qubba allatī waḍa`ahā al-Mu'ayyadiyya `ām 824 h.; A29. of No 888
Faṣl fī'l-ṭarīq alladhī bihī `allama Baṭlamyūs anna al-ḥāmil fī kull wāḥid min al-kawākib al-`ulwiyya `alā muntaṣaf mā bayna markazay al-burūj wa mu`addil al-masīr; A14. of No 103
al-faṣl al-thālith fī istikhrāj al-ḍil` al-awwal; St. Petersburg (Institute of Oriental B 2827)
R. faṣṣ al-khatam fī ma`rifat hay'at al-`ālam; A1. of No 0200
Fatḥ al-`ālim al-qādir bi sharḥ Luqṭat al-jawāhir li ma`rifat al-khuṭūṭ wa'l-dawā'ir; A1. of No 1377
Fatḥ dhī 'l-ṣifāt al-saniyya bi sharḥ matn al-Yasamīniyya; M1. of No 1377
Fatḥ al-futūḥ fī Sharḥ Rayḥānat al-rūh = Nafḥ al-fuyūḥ fī Sharḥ Rayḥāna al-rūḥ; A1. of No 1046
al-Fatḥ al-karīm al-bāqi fī ma`rifat al-dā'ir wa faḍlihi āfāqī; Cairo (Mīqāt 644/1)
Fatḥ al-malik al-jawād bi tashīl qismat al-tarikāt `alā ba`d al-`ibād; M1. of No 1346
Fatḥ al-mawāqīt fī sharḥ al-Yawāqīt; Rabat (General 2527).
Fatḥ al-mubdi` fī sharḥ al-Muqni`; M2. of No 924
Fatḥ al-mughīth fī sharḥ al-Yawāqīt; Tripoli (Waqfs U 1189/1)
Fatḥ al-muwaqqit fī sharḥ al-Yawāqīt; A4. of No 1194
Fatḥ al-qādir fī waḍ` faḍl al-dā'ir; A45. of No 873
Fatḥ rabb al-bariyya `alā matn al-Sakhāwiyya; M2. of No 1355
Fatḥ Rabb al-bariyya fī ḥall alfāz Nasamat al-nafḥiyya; A2. of No 1193
Fatḥ al-Raḥmān fī Ikhtiṣār Zīj-i Sulṭan; A2. of No 1380
Fatḥ al-wahhāb `alā Nuzhat al-ḥussāb; M2. of No 1066
Fatḥ al-wahhāb manẓūma fī'l-ḥisāb; M1. of No 878
al-R. al-fatḥiyya; A2. of No 845; Mu1. of No 926
al-R. al-Fatḥiyya (al-Shihābiyya) fī'l-a`māl al-jaybiyya; A7. of No 873
R. al-fawā'id fī'l-ra'y al-muḥaṣṣal min al-aqdamīn fī ajrām al-samāwiyya wa bayān madhāhibihim; A6. of No 317
R. fī'l-fawā'id wa'l-mustanbaṭāt min sharḥ al-muṣādarāt; M3. of No 328
R. fī al-Farq Bayna Sā`at al-Zavāl wa Sā`at al-Gharb; A4. of No 1387
Fatwā fī ma`rifat al-Qibla; Paris (5311/1)
Fawāid al-afkār fī `ilm al-firkār; M1. of No 027
Fawā'id `ashara; Mu2. of No 807

al-Fawā'id al-bahā'iyya fi'l-qawā`id al-ḥisābiyya; M1. of No 657
Fawā'id fi istikhrāj al-ḍil` al-awwal min ayy muḍalla`; M1. of No 1254
Fawā'id fi istikhrāj minṭaqat al-kura wa ma`rifa al-jayb; A13. of No 1004
Fawā'id fi ma`rifat al-`amal bi niṣf dā'irat al-mu`addil; A1. of No 1223
Fawā'id fi ma`rifat al-azlāl li-`arḍ `Adan wa li-`arḍ Ta`izz; A4. of No 960
K. al-fawā'id fi ma`rifat `ilm al-baḥr wa'l-qawā`id; AGI. of No 904
Fawā'id-i jamālī; M1. of No 832
al-Fawāid al-jalīla fi ḥall majhūlāt al-wasīla; M1. of No 887; Istanbul (Süleymaniye, Laleli 2755)
al-Fawā'id al-khaqāniyya al-Aḥmad-Khāniyya; E1. of No 1090
al-Fawāid al-Khurāsāniyya = Sharḥ Farāiḍ Sirājiyya; M4. of No 749
Fawā'id min kalām Abī `Alī al-Khayyāṭ; A2. of No 37
al-Fawāid al-mīqātiyya; Gotha (1378/1)
Fawā'id al-nujūm; A4. of No 875
Fawāid-i Ṭūsī dar jabru muqābala; M21. of No 606
Fawāt al-wafayāt; HS1. of No 740
Fawātiḥ al-raghā'ib fi khuṣūṣiyāt awqāt al-kawākib; A1. of No 1421
Fayḍ al-wahhāb fi sharḥ Khulāṣat al-ḥisāb; M1. of No 1398
al-Fayḍ al-`Amīm fi Ma`rifat Aḥkām Ṣadr al-Taqwīm; A6. of No 1040
R. fi'l-fi`l wa'l-infi`āl wa qismātihā; PH15. of No 317
K. fihrist al-`ulūm; HS1.of No 272
(K.) fiqh al-ḥisāb; M1. of No 472; M1. of No 556
Firdaws al-ḥikma; E1. of No 72
Furū`-i `ilm-i `adad; M2. of No 1021
K. al-furūsiyya wa'l-munāsib al-harbiyya; MePh1. of No 643
R. fi'l-fuṣūl; A2. of No 50
K. fuṣūl al-madanı; PH8. of No 180
K. al-fuṣūl fi'l-ḥisāb al-hindī; M1.of No 232
K. al-fuṣūl fi'l-uṣūl; PH6. of No 606
Fuṣūl fi ma`rifat al-mawki` wa niṣf al-quṭr wa bu`d al-markaz li'l-muqanṭarāt; A3. of No 813
Fuṣūl kāfiyya fi ḥisāb al-takht wa'l-mīl; M1. of No 682
al-Fuṣūl al-muhimma fi mawārīth al-umma; M24. of No 783
Fuṣūl-i Ṭabarı; A1. of No 0215
Fuṣūl yuḥtāju ilayhā fi ṣinā`at al-manṭiq; PH9. of No 180
R. fuṣūṣ al-ḥukm; PH5. of No 180
al-Futūḥ al-`Alā'iyya; A4. of No 1314
Futūḥāt-i ghaybiyya; M10. of No 1080
K. al-futūḥāt al-rabbāniyya fi sharḥ al-Mubtakarāt al-ḥisābiyya; M2. of No 976
al-Futūḥāt al-wahbiyya fi sharḥ al-risāla al-Fatḥiyya fi'l-`amal bi['l-rub`] al-mujayyab; A1. of No 1119
Fuyūḍāt-i maghnaṭīsiyya; Ph1. of No 1328

-G-

Gawāhir-nāma-yi sulṭānī; Mi1. of No 877
Ghaniyyat al-ḥisāb; St. Petersburg (Institute of Oriental Studies B 842/13)
Gharā'ib al-funūn wa mulaḥ al-`uyūn wa-nuzhat al-`ushshāq li'l-ṭālib al-mushtāq fi'l-falak wa'l-aqālīm; A1. of No 822
Gharā'ib al-ḥisāb wa`ajā'ib al-ḥussāb; M1. of No 393
Gharīb al-nāqilīn fi aḥwāl al-nayyirayn; A2. of No 1032
R. Gharāib al-hay'a; A1. of No 0173
Ghāya al-ikhtiṣār `alā rub` al-muqanṭarāt al-shimāliyya; Oxford (Bodleian I 1043)
Ghāyat al-ghāyāt fi'l-muḥtāj ilayhi min Uqlīdis wa'l-mutawassiṭāt; M4. of No 599
Ghāyat al-ḥakīm; A5. of No 281
Ghāyat al-idrāk fi'l-`amal bi kurat al-aflāk; Cairo (Fadil mīqāt 198/1)
Ghāyat al-intifā` fi'l-`amal bi'l-bakhsh alladhī fi ākhir qaws al-irtifā``;A7. of No 775; Paris (2547/11)
K. ghāyat al-intifā` fi ma`rifat al-dā'ir wa faḍlihi wa'l-samt min qibal al-irtifā`; A5. of No 283
Ghāyat-i juhd al-ḥussāb; M1. of No 1259
Ghāyat al-kuttāb (al-lubāb) fi a`māl al-ḥisāb; M1. of No 747
Ghāyat al-Ma`mūl wa Nihāyat al-Mas'ūl; A15. of No 940
Ghāyat al-maṭlab fi'l-`amal bi'l-rub` al-āfāqī al-mujayyab; A1. of No 763; Paris (2519)
Ghāyat al-murād fi wafq al-a`dād; M1. of No 0134
Ghāyat al-su'l (Fawā'id) fi sharḥ al-`ashrat fuṣūl; A1. of No 1060
Ghāyat al-su'l fi'l-iqrār bi'l-dayn al-majhūl; M14. of No 783
Ghāyat al-taḥarrı; A1. of No 1078
Ghāyat al-ṭullāb fi funūn al-ramy bi'l-nushāb; Me1. of No 761
Ghāyat ūlā al-albāb fi jawāhir `ilm al-ḥisāb; Istanbul (Süleymaniye, Laleli 2754)
Ghāyat al-`udad fi `ilm al-`adad; Cairo (Tal`at riyad. 130)
M. fi'l-ghayr al-mutanāhī; PH5. of No 198
R. al-Ghāzāniyya fi'l-ālāt al-raṣadiyya; Hyderabad (Central State Riyad. 153)
(al-)(R.) al-Ghiyāthiyya; A1. of No 832; A1. of No 804

Ghunya dhawī al-albāb fī sharḥ Kashf al-jilbāb; M11. of No 865
Ghunya; PH1. of No 473
Ghunyat al-fahīm wa'l-ṭarīq ilā ḥall al-taqwīm; A15. of No 815
Ghunyat al-ḥussāb fī `ilm al-ḥisāb = Nuzhat al-nuẓẓār fi'l-ḥisāb bi qalam al-ghubār = Nuzhat al-ḥisāb = Mukhtaṣar al-Murshida; M7. of No 783
Ghunyat al-ḥussāb fī `ilm al-ḥisāb; M1. of No 602
Ghunyat al-mustafīd; A12. of No 635
Ghunyat al-rā'id fī ṭabaqāt ahl al-ḥisāb wa'l-farā'iḍ; HS1. of No 1085
Ghunyat al-ṭālib fī taqwīm al-kawākib; A1. of No 1168
Ghunyat al-ṭālibīn `alā judhūr Ibn al-Yāsamīn; M9. of No 865
Ghunyat al-ṭullāb fī san`at al-asturlāb; Hyderabad (Salar Jung Hay'a 24)
al-Ghurra fi'l-kalām `alā bayt al-ibra; Ph1. of No 1207
R. al-ghurbal; M1. of No 1356
Ghurra al-zījāt; A19. of No 348
Ghurra-yi asfuruz-i `ālam; Aligarh (Azad Sulayman 522/32)
Fī ghurūb al-shams `inda minārat al-Iskandariyya; G10. of No 348
K. al-ghushsh fī ṣinā`at al-ḥisāb al-ṣaghīr; M3. of No 100
Guftagān dar aḥkām-i ittiṣāl-i qamar bā kawākib mutaḥayyira dar burūj; A1. of No 217
Gurranāma; A7. of No 1332
Gushāyish u rahāyish; PH2. of No 393
Guzīda-yi Burhān al-kifāya; Tehran (University 935)

-H-

R. ḥabībiyya fi'l-ḥisāb; St. Petersburg (Institute of Oriental C 2417/4)
al-Ḥabṭaq al-aṣghar; A33. of No 842
K. ḥabṭaq ḥall al-shams wa'l-qamar = al-Ta`dīl al-muḥkam; A2. of No 283
al-Ḥabṭaq fi'l-taqwīm al-muṭlaq; A3. of No 1086
Ḥadā'iq al-daqā'iq; Tehran (University Adab. 107/3)
Ḥadāiq al-anwār fī ḥaqāiq al-asrār; E2. of No 535
Ḥadāiq al-siḥr fī daqāiq al-shi`r; L1. of No 489
Ḥadaq al-nāẓir fī ikhtilāf al-manāẓir; A12. of No 1018
Ḥadd al-jism; Ph7. of No 317
al-Hādī ilā'l-Majisṭī; Philadelphia (Public 1489)
al-Ḥadīqa al-hilāliyya; A10. of No 1058
Hadiyya al-Ikhwān; A13. of No 933
Hadiyyat al-Muhtadī fī `ilm al-handasa wa'l-misāḥa wa ramy al-khamīra wa ḥafr al-lughm; MMe1. of No 1351
Haftād bāb dar ma`rifatt-i asṭurlāb = Tuḥfa-yi Ḥātimiyya dar fann-i asturlāb; A5. of No 1058
K. -i Ḥajjī Khalīl; M2. of No 1107
R. fī hal al-ta`dīl; A8. of No 194
Fi'l-hāla wa qaws quzaḥ; Ph9. of No 328; Ph3. of No 674
R. dar hāla wa qaws-i quzaḥ; Ph1. of no 457
R. fī Ḥall Ashkāl Mu`addil al-Qamar li-al-Masīr; A9. of No 845
R. ḥall ashkāl `Uṭārid; A15. of No 802
R. fī ḥall ashkāl Uqlīdis; M1. of No 098
R. fī ḥall dā'irat-i mu`addal; A10. of No 990
R. fī ḥall al-Durar al-yatīma li muddat sana kāmila; A24. of No 842
Ḥall `aqd al-ishkāl fī misāḥat al-ashkāl = al-Ṭuffāḥa fī a`māl al-misāḥa; M5. of No 584
R. fī ḥall al-ishkāl al-wārid `alā'l-shakl al-khāmis `ashar min Uṣūl Uqlīdis; M1. of No 936
Ḥall-i `aqd = Ḥall-i aqd-i Lārī dar sharḥ-i Zīj-i īlkhānı; A1. of No 109
Ḥall al-ishkāl fī mabāḥith al-ashkāl; M1. of No 863
Ḥall al-Khulāṣa li ahl al-riyāsa; M1. of No 1155
Ḥall kitāb Uqlīdis; M1 of No 496
Ḥall al-masāil al-handasiyya al-mawjūda fī matn al-Shamsiyya li'l-Taftazānī; M1.of No 047
Ḥall-i masā'il; A2. of No 109
Ḥall-i mushkilāt-i Mu`īniyya; A20. of No 606
K. ḥall al-mushkil fī masīr al-kawākib; A1. of No 0113
Ḥall mushkilāt al-Ishārāt; PH4. of No 606
R. fī ḥall al-shakk fi'l-shakl al-thālith wa'l-`ishrīn; M17. of No 296
R. fī ḥall shubha `araḍat lahu fi'l-maqāla al-thālitha `ashara min kitāb al-Uṣūl; M2. of No 299
M. fī ḥall al-shukūk `alā Uqlīdis fi'l-maqāla al-khāmisa min kitābihī fi'-l-uṣūl al-riyāḍiyya; M14. of No 327
M. fī ḥall shukūk fi'l-maqāla thāniya `ashara min kitāb Uqlīdis; M32. of No 328
K. fī ḥall shukūk kitāb Uqlidis fi'l-uṣūl wa sharḥ ma`ānīh; M1. of No 328
M. fī ḥall shukūk al-maqāla ūlā min kitāb Uqlīdis; M36. of No 328
Ḥall shukūk fī kitāb al-Majisṭī yashukku fīhā ba`ḍ ahl al-`ilm; A14. of No 328
Ḥall al-taqwīm; A1. of No 0140
Ḥall-i taqwīm fī `ilm al-tanjīm; A5. of No 972
Ḥall al-taqwīm dar `ilm-i nujūm; London (India Office 2255/1)
R. fī Ḥall 'Uqadi Bad' al-Mawāḍi` al-Muḍ'ila min Ta`dīl al-'Ulūm; A14. of No 940
Ḥall mā lā yunḥal; M1. of No 995
Ḥall mā lā yunḥallu; A2. of No 936
(K.) R.(-yi) (dar)(min) (fi'l-) handasa; Hyderabad (Central State Riyad. 217); Istanbul (Süleymaniye, Çelebi 229); M2. of No 1419; M1. of No 165; M1.

of No 677, Istanbul (Süleymaniye AS 2740); M1. of No 069, Baghdad (Waqfs 5485/2,3); Hyderabad (Central State Riyad. 218); M5. of No 317; M3. of No 318; M5. of No 845; M1. of No 240; M2. of No 431; M2. of No 535; M4. of No 668; M1. of No 0194; Alma-ata (State 3982-47); Dushanbe (Ferdowsi 1930); Dushanbe (Institute of Oriental Studies 2851/5).

K. handasa al-`aql; M1. of No 93

K. fi'l-handasa ilā Ismā`il ibn Bulbul; M24. of No 103

Fi'l-handasa wa'l-raqm al-hindi; M1. of No 502

R. handasiyya; (Vienna, 328)

Handasiyyāt; M1. of No 994; Baku (Institute of Manuscripts M 151/1)

R.-yi ḥaqīqat-i asṭurlāb; A10. of No 348

Ḥaqā'iq al-daqā'iq `alā daqā'iq al-ḥaqā'iq; M16. of No 783

Ḥaqā'iq al-raqā'iq `alā Raqā'iq al-ḥaqā'iq; A15. of No 1367

R. al-ḥarakāt; PH3. of No 1044

K. ḥarakat al-aflāk; A3. of No 74

Fī ḥarakat al-daḥraja wa'l-nisba bayna mustawī wa munḥanī; M28. of No 606

Ḥarakāt al-kawākib al-thābita; A5. of No 1344

Fī ḥarakat al-qamar; Paris (2457/14)

K. fī ḥarakat al-kura; M11. of No 79

Ḥarakat-i sekkīz yuldūz; Tehran (University 1997/4)

K. fī ḥarakāt al-shams; A1. of No 174

Fī ḥarakat wa ṭabī`at al-kawākib; A2. of No 415

M. fī ḥarakat al-iltifāf; A28. of No 328

R. fī ḥarakāt al-nayyirayn; Dublin (Chester Beatty 5254)

M. fī ḥarakat al-qamar; A2. of No 328

R. fi'l-ḥarr wa'l-burūda; Ph4. of No 606

K. al-ḥaṣā fi'l-kulā wa'l-mathāna; ME3. of No 142

Ḥāshiya `alā Ashkāl al-ta`sīs; M1. of No 819; M1. of No 1143; Istanbul (Süleymaniye, Laleli 2711)

Ḥāshiya `alā'l-Charpardī; L1. of No 1277

Ḥāshiya `alā Durra al-tāj; E1. of No 062

Ḥāshiya `alā'l-Fatḥiyya al-Māridīniyya `alā al-rub` al-jayb; A1. of No 1022

Ḥāshiya `alā Ḥikmat al-`ayn; E1. of No 788

Ḥāshiya `alā Khulāṣat al-ḥisāb; Tehran (University 881/1); Mahachqala (Institute of History, Language, and Literature 1983/4)

Ḥāshiya `alā K. al-Majisṭī = Sharḥ Taḥrīr al-Majisṭī; A2. of No 808

Ḥāshiya `alā M. Sa`d al-Dīn al-Taftazānī fī tasāwī al-zawāyā al-thālātha; St. Petersburg (Institute of Oriental B 2094/9)

Ḥāshiya `alā'l-Mulakhkhaṣ fī 'l-hay'a; Manchester (Rylands 364)

Ḥāshiya àlā Nihāyat al-idrāk; A3 of No 858

Ḥāshiya `alā Qism al-Falakiyyyāt min al-Mawāqit fī `Ilm al-Kalām; A6. of No 983

Ḥāshiya `alā R. al-Sajāwandī fi'l-ḥisāb; Istanbul (Nuruosmaniye 2982)

Ḥāshiya `alā Sharḥ Ashkāl al-ta`sīs; M1. of No 1151

Ḥāshiya `alā Sharḥ Ashkāl al-ta`sīs fi'l-handasa; M1. of No 914

Ḥashiya `alā Sharḥ Ḥikmat al-`ayn; E2. of No 668; Mashhad (University 165)

Ḥāshiya `alā Sharḥ al-Jaghmīnī; Istanbul (Köprülü 338.); Istanbul (Süleymaniye AS 2607.); Istanbul (Süleymaniye, Laleli 2710)

Ḥāshiya `alā Sharḥ Kamāl al-Dīn al-Turkumānī li-Mulakhkhaṣ Maḥmūd al-Jaghmīnī fi'l-hay'a; A6. of No 914

al-Ḥāshiyya `alā Sharḥ al-Lum`a; M1. of No 1400

Ḥāshiya `alā Sharḥ al-Mulakhkhaṣ; A2. of No 1143; A11. of No 938

Ḥāshiya `alā Sharḥ al-Mulakhkhaṣ fi'l-hay'a li-Qāḍī-zāda al-Rūmī; A1. of No 871

Ḥāshiya `alā Sharḥ Mir Sayyid Sharīf `alā Mulakhkhaṣ al-Jaghmīnī Mashhad (Imam Riza 46.).

Ḥāshiya `alā Sharḥ Mukhtaṣar al-Uṣūl; M1. of No 788

Ḥāshiya `alā Sharḥ Mulakhkhaṣ al-Jaghmīnī; A16. of No 1058

Ḥāshiya `alā Sharḥ Qāḍī -zāda `alā Mulakhkhaṣ al-Jaghmīnī; A2. of No 858

Ḥāshiya `alā Sharḥ Qāḍī -zāda al-Rūmī li-Mulakhkhaṣ al-Jaghmīnī fi'l-hay'a; A7. of No 914

Ḥāshiya `alā Sharḥ al-R. al-Bahā'iyya fi'l-ḥisāb = Sharḥ bāb al-misāḥa min Khulāṣat al-ḥisāb; M1. of No 1329

Ḥāshiya `alā Taḥrīr kitāb al-kura wa'l-usṭuwāna; M7. of No 1080

Ḥāshiya `alā Taḥrīr Naṣīr al-Dīn al-Ṭūsī li kitāb al-Uṣūl li Uqlīdis; M2. of No 788

Ḥāshiya àlā Taḥrīr Uqlīdis; M1. of No 901; Hyderabad (Salar Jung Riyad. 40/1)

Ḥāshiya `alā Taḥrīr al-Uṣūl; Tehran (University 4258)

Ḥāshiya bar mukhtaṣar al-Talkhīs; Bombay (Asiatic Society 8/3)

Ḥāshiya dar Sharḥ Ishārāt; PH1. of No 1003

Ḥāshiya dar Taḥrīr-i Uqlīdis; M1. of No 839

Ḥāshiya fī sharḥ Ashkāl al-ta'sīs; M1. of No 985

Ḥāshiya li'l-Ma`ūna; M2. of No 787

Ḥāshiya mukhtaṣara fī Ma`rifat taqāwīm Ṭūsī; Konya (Yusuf Ağa 735/2)

Ḥāshiya sharḥ Mulakhkhaṣ; Tehran (University 881/2)

Ḥāshiya ukhrā li'l-Zawāyā; Baku (Institute of Manuscripts B 5746/6)

Ḥāshiyat Zawāyā al-muthallath al-Sa`diyya; Baku (Institute of Manuscripts B 5746/5)
Ḥāshiya-yi Sharḥ-i Mulakhkhas; Tehran (Sipahsalar 1143-1147)
Ḥāshiya-yi tawḍīḥ al-ash-kāl; Tehran (Sipahsalar 1071)
Ḥāshiyya bar Sharḥ-i Bīst bāb dar usṭurlāb; A3. of No 1181
Ḥāshiyya Sharḥ Mulakhkhaṣ; A2. of No 833
al-Ḥāshiya al-wāqi`a `alā'l-mas'ala al-sha`iriyya; A1. of No 1095
al-Ḥāsibiyya; M1. of No 353
K. al-ḥasnā`; Ph1. of No 995
K. al-Ḥaṣṣār fī `ilm al-ghubār; M1. of No 532
R.-yi Ḥātimiyya; PH1. of No 898
Ḥatt al-niqāb `an wajūh a`māl al-ḥisāb; M1. of No 780
al-Ḥāwi fī'l-ḥisāb; M22. of No 783
al-Ḥāwiya fī taḥqiq al-zāwiya; Patna (Bankipore 2436)
al-Ḥawāshī fī'l-`ilm al-riyāḍī; Istanbul (Süleymaniye AS 2609)
Ḥawāshī `alā ba`ḍ ashkāl kitāb al-Makhrūṭāt; M1. of No 534
Ḥawāshī `alā al-kitāb al-hindī fī'l-ḥisāb; M1. of No 0122
Ḥawāshī `alā kitāb al-Makhrūṭāt; Manisa (Public 1706/6)
Ḥawāshī `alā al-maqāla al-khāmisa wa'l-sādisa wa'l-sābi`a fī'l-Makhrūṭāt; Oxford (Bodleian I 987/3)
Ḥawāshī `alā Raqā'iq al-ḥaqā'iq; M2. of No 959
Ḥawāshī `alā Uqlīdis; M26. of No 606
Ḥawāshī dar Kuriyyāt-i Manālawus; M9. of No 1080
Ḥawāshī Uqlīdis; Berlin (State 5926)
Ḥawāshī `ala Raqā'iq al-ḥaqā'iq; M1. of No 1349
Ḥawāshī `alā Sharḥ Qāḍī-zāda `ala'l-Mulakhkhaṣ; A4 of No 893
K. al-ḥāwī; ME1. of No 142
Ḥāwī al-lubāb fī `ilm al-ḥisāb; M1. of No 782
Ḥāwī al-lubāb wa sharḥ Talkhīṣ Ibn al-Bannā fī'l-ḥisāb; M3. of No 815
Ḥāwī al-manqūl wa'l-ma`qūl; E1. of No 672
Ḥāwī al-mukhtaṣarāt fī'l-`amal bi rub` al-muqanṭarāt; A16. of No 873
K. R.(fī)(-yi) (dar) hay`at=hay'a; A1. of No 182; A2. of No 629; A3. of No 629; A1. of No 526; A1. of No 1259; A1. of No 938; A3. of No 977; Baku (Institute of Manuscripts B 5553/2); Hyderabad (Central State Jadid 5157, 15999); Hyderabad (Central State Riyad. 515); Hyderabad (Osmania University 1173); (Salar Jung Hay'a 9, 11); Oxford (Bodleian Pers. I 1545/2); (Bankipore 1650.); A1. of No 1093; A3. of No 896; A18. of No 1243; A2. of No 922, Hyderabad (Salar Jung Riyad. 103/5.); Istanbul (Süleymaniye Ismi khan 295/1.); (Kazan University 6.); Mahachqala (Institute of History, Language, and Literature 924/4); Tashkent (Institute for Oriental Studies 7622/3, 7761/2); A1. 0164; A4. of No 1044; A1. of No 833; A1. of No 963; A2. of No 985; St. Petersburg (Institute of Oriental Studies A 267/2); A1. of No 992; A1. of No 1270; A1. of No 1339; A13. of No 802; Istanbul (Süleymaniye AS 2632); Mahachqala (Institute of History, Language, and Literature 2208).
K. (fī)hay`at al-`ālam; A1. of No 142; A16. of No 328
R. (dar) (fī'l-) hay'a jadīda; A1. of No 1399; A26. of No 750
R. fī'l-hay`a al-islāmiyya; A1. of No 0117
al-Hay`a al-saniyya fī'l-hay`a al-sunniyya; A2. of No 896
R. fī'l-hay'a al-sunniyya; A1. of No 1209
R. fī'l-hay'a wa'l-handasa; AM1. of No 808
K. al-hay`a wa `ilm al-ḥisāb; MA1. of No 50
R.-yi hay'at-i Angrezı; A1. of No 1412
R. fī hay'at al-arḍ wa ashkāl ajrām al-samāwāt wa fī kayfiyyat al-kusūf wa'l-khusūf; A1. of No 0256
Fī hay`at al-falak, Fī ṣūrat al-kura; A6. of No 27
K. al-hay'at al-falak wa ikhtilāf ṭulū`ihī; A20. of No 88
M. fī hay'at ḥarakat kulli wāḥid min al-kawākib al-sab`a; A3. of No 328
Hay'at al-Islām; A12. of No 1332
Hay'at al-siyāq; M1. of No 089.
Ḥayāt al-qulūb; H1. of No 1213
K. al-ḥayawān; Z1. of No 76
R. haydariyya fī'l-asṭurlāb = Nuzhat al-ṭullāb fī `ilm al-asṭurlāb; A1. of No 1190
R. fī'l-hayūla; Ph1. of No 965
R. al-hayūlī wa'l-ṣūra; PH1. of No 1044
al-Hayūlā al-kabīr = K. al-hayūlā; Ph1. of No 142
al-Hayūlā al-Ṣaghīr; Ph2. of No 142
R. Ḥayy ibn Yaqẓān; PH7. of No 317; PH1. of No 494
K. fī'l-ḥayyiz wa'l-miqdār; M4. of No 180
Hesạb u farāiḍ Tashkent (Institute for Oriental Studies 6181)
Ḥewath ḥekhmetha; E1. of No 633
Heyete Dair bir Risale; A2. of No 1348
Hidāya al-`āmil; Gotha (1417. = St.Petersburg Nat. 130/5)
Hidāya min al-ḍalāla fī ma`rifat al-waqt wa'l-Qibla min ghayr āla; A1. of No 1134
Hidāya al-ḥikma; E1. of No 595
al-Hidāya fī ma`rifat al-Qibla bi lā ḥiyal; A1. of No 557; Istanbul (Atıf Efendi 1324)
Hidāya al-mulūk turkī fī waḍ` al-muqanṭarāt; A3. of No 933
Hidāya ulā al-baṣā'ir wa'l-abṣār ilā ma`rifat ajzā' al-layl wa'l-nahār; A2. of No 1377

Hidāyat al-`āmil (al-sā'il fi'l-`amal) bu'l-rub` al-kāmil; A25. of No 873
Hidāyat al-`āmil fi mā yata`allaq bi rub` al-kāmil; A2. of No 1196
Hidāyat al-ḥāir ilā ma`rifat waḍ ' faḍl al-dāir; Algiers (1467/2.) = Cairo (V 310/2)
Hidāyat al-ḥisāb ilā Khulāṣat al-ḥisāb; M1. of No 0234
Hidāyat al-nujūm; A1. of No 658; A1. of No 736
Hidāyat al-tanjīm; A6. of No 1285
Hidāyat al-ṭullāb fi `ilm al-ḥisāb; M1.of No 581
Ḥijāb al-ṭullāb fi'l-`amal bi'l-asṭurlāb; Hyderabad (Central State Riyad. 42)
K. ḥikāyāt wa gharā'ib wa `ajā'ib wa laṭā'if wa nawādir wa fawā'id wa nafā'is; E1. of No 1134
Ḥikāyat al-āla al-musammāt al-sudus al-Fakhrī; A15. of No 348
Ḥikmat-i `arūḍ; L3. of No 317
Ḥikma al-`ayn; E1. of No 616
Ḥikmat al-ishrāq; PH1. of No 497
Ḥikmat al-riyāḍī; A3. of No 1259
K. hindī fi'l-ḥisab; Tarim (Hills of Yemen, Al-Husayn 79/5)
(K.)(M.) (R.) (yi) (fi) (dar) (al-)ḥisāb; M1. of No 527; (Budapest Quart. 23); Hyderabad (Central State Jadid 3423, 4066, 5050, riyad. 438); Hyderabad (Osmania University 250 = Hyderabad riyad. 438); (Salar Jung Riyad 9, 27. = Hyderabad riyad. 439); (Rampur Rada 1244. = Hyderabad riyad. 439); Tashkent (Institute for Oriental Studies 2692/2.); M1. of No 042; M1. of No 043; M1. of No 1271; M1. of No 1409; M1. of No 1416; M3. of No 1155; Calcutta (Asiatic Society of Bengal 1474); Calcutta (Buhar 338/2); (Kazan University 1104); (Kazan University 2438/1); Baghdad (Waqfs 6); St. Petersburg (Institute of Oriental B 2999/2); St. Petersburg (Institute of Oriental D 347/3); St. Petersburg (Institute of Oriental Studies B 993/8); Tehran (Sipahsalar 1273); M1. of No 0131; M1. of No 0229; Mashhad (Imam Riza 91, 92); (Rampur Rada 2323a); Tashkent (Institute for Oriental Studies 8698/1); Tehran (Sipahsalar 1271, 1272); M4. of No 1198; M1. of No 0111; M1. of No 0258; M1. of No 1204; M1. of No 1284; M5. of No 1058; M5. of No 749; M6. of No 808; Tehran (University 887); M1. of No 0187; Kazan (University 213). M2. of No 425; M1. of No 471; M1.of No.852; Istanbul (Nuruosmaniye 2978); Princeton (Yehuda 3021); M1. of No 1423; M2. of No 278; M2. of No 706; M4. of No 527; Tehran (Milli - National- 43/2, 588/2); Alma-ata (State 4020-47.); Dushanbe (Institute of Oriental Studies 2851/1); Dushanbe (Institute of Oriental Studies 2851/8); Mashhad (Imam Riza 33); Mashhad (Mawlawi 481/1); Mosul (Hajiyat 85/2, 116/2); Rayy (`Abd al-`Azim 238/4); Tehran (Majlis 206/2, 640/9, 2370/4, 2373/1, 2461/1, 2945/2, 5094/3.); Tehran (Malik 3224/2, 6317/1); Tehran (Sipahsalar 1274, 7416/3); Tehran (University 2160/9, 4722/2); Tehran (University Huquq 217/8); Baku (Institute of Manuscripts A 197).
Ḥisāb-i ahl-i tanjīm; Mashhad (Mawlawi 453/1); Tehran (Dihkhuda 55/3)
Ḥisāb al-aqālim al-sab`a; A7. of No 67
K. al-ḥisāb bilā takht bal bi'l-yad; M8. of No 219
R.-yi ḥisāb dar ḍabt-i farā'iḍ; M6. of No 1198
R. ḥisāb ḍarb; Tashkent (Institute for Oriental Studies 7702/3)
Ḥisāb-i ḍarb u qismat; Tehran (Majlis 5373/5, 5855/8); Tehran (Sipahsalar 7549/1)
Ḥisāb-i ḍarb wa maḍrūb; M1. of No 0123
Ḥisāb-i ḍarb wa qismat; M1. of No 0148
R. fi ḥisāb al-daraj wa'l-daqā'iq; M1. of No 1160
(K.)R. fi ḥisāb al-dawr; M6. of No 224; M5. of No 97; M7. of No 225
K. ḥisāb al-farāiḍ; Tehran (University 1947/3)
Ḥisāb ham handasa; Dushanbe (Institute of Oriental Studies 1611/1)
Ḥisāb al-hind; M1. of No 036; M1. of No 425
R. dar ḥisāb u handasa; M7. of No 845
K. fi ḥisāb al-Hind; M11. of No 309
K. M. fi'l-ḥisāb al-hindī; M8. of No 327; M1. of No 41; M4. of No 224
Ḥisāb-i ḥurūf; Baku (Institute of Manuscripts A 1061)
Ḥisāb inḥirāf Qiblat Miṣr bi ṭarīq Ulugh Beg; A3. of No 1404
al-R. fi ḥisāb al-jabr wa'l-muqābala; M3. of No 749
Ḥisāb-i jumal u jadwal-i sittīnī; Tabriz (Milli - National 3642) = Tehran Malik 3207/5); Tehran (Malik 3207/5)
K. M. fi'l-ḥisāb al-khata'ayn; M45. of No 328; M3. of No 229
Ḥisāb al-khaṭa'ayn; Istanbul (Süleymaniye, Fatih 3439/22)
M. fi ḥisāb kusūf al-shams wa'lqamar; A15. of No 103
R. dar ḥisāb-i kusūr; Tashkent (Institute for Oriental Studies 2245/9)
Fī ḥisāb al-kusūr; Tashkent (Institute for Oriental Studies 6131/9)
Ḥisāb-i kusūr-i tasūj u dīnār; Tehran (Majlis 5094/4)
R. fi ḥisāb al-maftūḥ; Berlin (State 6005)
R. (Muqaddima) fi'l-ḥisāb al-masā'il al-jaybiyya wa'l-a`māl al-falakiyya; Cairo (Fadil mīqāt 177/2 = Tal`at mīqāt 230/4)
R. fi ḥisāb mawāqi` al-sumūt wa'l-muqanṭarāt; A15. of No 888
K. ḥisāb al-muka`abāt; M7. of No 231
R. fi'l-ḥisāb mulḥaqa bi'l-Shamsiyya; M1. of No 723
R. fi ḥisāb al-munajjimīn; M1. of No 704
K. fi'l-ḥisāb al-nujūmī; A3. of No 93
K. fi ḥisāb ru'yat al-ahilla; A5. of No 103

K. ḥisāb al-shuhūr; A1. of No 524
K. fī ḥisāb ʿalā'l-takht bi-lā maḥw; M3. of No 219
K. fī ḥisāb al-talāqī ʿalā jihat al-jabr wa'l-muqābala; M5. of No 118
R. dar ḥisāb-i tanjīm; Oxford (Bodleian Pers. I 75/4 = 1546/4)
R. fi'l-ḥisāb wa'l-farāiḍ; M1. of No 0284
al-Ḥisāb wa'l-jabr wa'l-muqābala; M1. of No 666
(K.) (R.) fī'l-ḥisāb wa'l-jabr wa'l-muqābala; M20. of No 606; M1. of No 278
R. dar ḥisāb wa kitāb dar handasa; M3. of No 1198
Ḥisab-i manẓūm; M1. of No 0136
Fī ḥisāb al-masāil al-jaybyya wa'l-aʿmāl al-falakiyya; A1. of No 040
Ḥisāb al-munfaṣil min al-maqāla al-ʿāshira min kitāb Uqlīdis wa jumlat ḥisāb dhawāt al-ismayn; Paris (2457/41)
Ḥisāb al-najm; Kaduna (Jos Museum and Lugard Hall 173)
Ḥisāb-nāma; M1. of No 1324; M1. of No 1325
Ḥisāb al-qamar; A9. of No 972
Ḥisāb ʿuqad al-yadayn; M2. of No 768
Ḥisāb wa handasa; Dushanbe (Institute of Oriental Studies 659, 1200)
Ḥisāb wa jabr wa Handasa; Beirut (University of St.Joseph 241)
R. fī'l-ḥisāb wa'l-mīrāth; Cairo (Talʿat majamiʿ 688/5)
R.-yi ḥisāb wa misāḥat; Tashkent (Institute for Oriental Studies 2692/3)
R. fī'l-ḥisāb wa'l-misāḥa wa'l-jabr wa'l-muqābala wa'l-khaṭa'ayn; Tehran (University 4409/3)
R. fī ḥisāb wa'l-ṣarf; Mosul (Hajiyat 144)
Ḥisāba ʿālam; A1. of No 979
al-R. al-ḥisābiyya fī'l-aʿmāl al-āfāqiyya; A2. of No 954
Ḥiṣaṣ wa jadāwil; Fas (Zawiya 1c)
(K.)(R.) (M.) (fī'l-)(dar) ḥiyal; Me1. of No 239; Me1. of No 40; Me1. of No 423; Me1. of No 74; Me1. of No 94; Me1.of No 28; My1. of No 103; Tehran (Sipahsalar 1323); Tehran (Sipahsalar 1324); Tehran (Sipahsalar 1322).
R. fī'l-ḥiyal al-ʿadadiyya wa ʿilm iḍmārihā; M21. of No 79
K. al-ḥiyal al-rūḥāniyya wa'l-asrār al-ṭabīʿiyya fī daqāiq al-ashkāl al-handasiyya; M2. of No 180
Fī'l-ḥiyal wa'l-athqāl; Me1. of No 427
Hudāya al-ʿāmil; St. Petersburg (National 130/5)
Ḥudūd al-ʿālam; St. Petersburg (Institute of Oriental C 612/3)
Fī ḥudūd al-ashyāʾ wa rusūmihā; PH1. of No 79
K. al-ḥudūd; Istanbul (Süleymaniye AS 2672/2)
R. al-ḥudūd; PH5. of No 317
K. ḥulūl kawākib al-burūj al-ithnay ʿashar; A5. of No 296
K. al-ḥurūf; L1. of No 62; L3. of No 180
Ḥujaj ṭabīʿiyya mustakhraja min kutub Arisṭāṭālīs fī'l-radd ʿalā man zaʿama anna al-falak ḥayy nāṭiq; A2. of No 127
K. fī'l-ḥujja ʿalā istidārat al-samāʾ wa'l-arḍ; A1. of No 78
Ḥukm ʿinda ṭulūʿ al-Shirʿa; Paris (2578-2580)
R. fī'l-ḥujja al-mansūba ilā Suqrāṭ fī'l-murabbaʿ wa quṭrihī; M14. No 103
R. fī Anna Ḥukm al-Khārij Ḥukm al-Tadwīr bi ʿAynihī fī Wuqūf al-Kawākib; A8. of No 845
M. fī'l-ḥukm ʿalā'l-masā'il al-mutakhaṣṣaṣa bi aḥwāl al-sā'il; A11. of No 635
R. (fī) (al-)ḥurūf; M1. of No 894; L1. of No 317
Ḥusn al-hadiyya; M1. of No 1145
Ḥusn al-muḥā ḍara fī akhbār Miṣr wa'l-Qāhira; H2. of No 896

-I-

Ibāḥat al-Bāha fī ʿIlmay al-ḥisāb wa'l-misāḥa; M2. of No 853
R. fī'l-Ibāna ʿan al-aʿdād allatī dhakarahā Aflāṭūn fī kitābihī al-siyāsa; M16. of No 79
al-Ibāna ʿan aflāk; A3. of No 31
R. fī'l-Ibāna ʿan al-ʿIlla al-fāʿIla al-qarība li'l-kawn wa'l-fasād; PH1. of No 79
K. al-ibāna ʿan istidārat al-falak; A1. of No 45
R. fī'l-Ibāna anna ṭabīʿat al-falak mukhālifa li-ṭabīʿat al-ʿanāṣir al-arbaʿa wa annahā ṭabīʿa khāmisa; Ph9. of No 79
al-Ibāna ʿan al-ṭarīqa al-muḥtaraqa; Ph4. of No 348
K. al-ʿIbar wa dīwān al-mubtada' wa'l-khabar fī ayyām al-ʿarab wa'l-ʿajam wa'l-barbar wa man ʿāṣarahum min dhawī'l-sulṭān al-akbar; H1. of No 771
R. ilā Ibn Khashshāb fī masā'il ḥisābiyya jabr wa muqābala; M12. of No 487
K. fī ibṭāʾ al-ḥaraka fī falak al-burūj wa surʿatihā bi-ḥasab al-mawāḍiʿ allatī yakūnu fīhi min al-falak al-khārij al-markaz; A2. of No 103
Ibṭāl al-buhtān bi-īrād al-burhān ʿalā aʿmāl al-Khwārizmī fī zījihī; A23. of No 348
Fī ibṭāl ẓunūn fāsida khaṭarat ʿalā qulūb baʿḍ al-aṭibbā fī amr al-kawākib al-ḥāditha fī'l-jaww; M12. of No 348
R. fī Ibṭal aḥkām al-nujūm = R. fī'l-radd ʿalā al-munajjimīn; A4. of No 317
M. fī ibṭāl anna al-ʿadad ghayr mutanāhī; PH6. of No 198
R. fī Ibṭal ṣināʿat aḥkām al-nujūm; A4. of No 47

M. fī ibṭāl al ṭarīq allati salakahā Biṭlīmyūs fī Istikhrāj al-bu'd al-ab'ad li-Uṭarid; A8. of No 402
K. fi'l-i'dā'; ME1. of No 118
K. i'dad al-asrar fi asrār al-a'dād; M1. of No 584
Īḍaḥ al-adilla 'alā kayfiyyat samt al-Qibla; G13. of No 348
Īḍāḥ al-adilla fī ma'rifat samt al-Qibla wa ghayr dhālika; Fas (Zawiya 5k)
K. īḍāḥ al-ashkāl al-i'tidāliyya fī rasm al-sā'āt wa'l-asṭiḥā al-mustawiyya; A2. of No 1341
K. iḍāḥ al-burhān 'alā ḥisāb al-khaṭa'ayn; M1.of No 252
Iḍāḥ al-ghāmiḍ; A1. of No 860
Iḍāḥ al-maqāṣid fī sharḥ asās al-qawā'Id; M2. of No 698
R. Īḍāḥ al-mughayyab fi'l-'amal bi'l-rub' al-mujayyab = Kashf al-mughayyab fi'l-ḥisāb bi'l-rub' al-mujayyab; A12. of No 750
Iḍāḥ al-muktatam fī ḥisāb al-arqām; M1. of No 1074
K. īḍāḥ al-multaqaṭ limā abhama al-Miṣbāḥ; A1.of No 862
Iḍāḥ al-saïd fī 'Ilm 'aqd al-anāmil; M1. of No 072
al-Iḍāḥ al-Shāfī' bi'l-ittiqān fī ma'rifat al-manāzil wa'l-azmān; A1. of No 0262
al-Īḍāḥ wa'l-tabyān fī ma'rifat al-mikyāl wa'l-mīzān; Me1. of No 667
R. fī Iḍāḥ wijdān ab'ād mā bayna al-nāẓir wa marākiz a'midat al-jibāl wa 'uluww a'midatihā wa 'Ilm 'umq al-ābār wa 'urūḍ al-anhār wa ghayr dhālika wa hiya tusammā khūrīsṭis; M2 of No 79
al-R. al-Idāriyya fī ma'rifat al-awqāt; A1. of No 1032
'Iddat al-ḥāsib wa 'umdat al-muḥāsib; M5. of No 980
K. fī annahū idhā waqa'a khaṭṭ mustaqīm 'alā khaṭṭayn mustaqīmayn fa sayyara al-zāwiyatayn allatayn fī jiha wāḥida aqall min qā'imatayn fa 'inna al-khaṭṭayn iltaqayā idhā ukhrijā fī tilka al-jihā = M. fī burhān al-muṣādira al-mashhūra min Uqlīdis; M17. of No 103
al-Ifāda wa'l-i'tibār fi'l-umūr al-mushāhada wa'l-ḥawādith al-mu'āyana bi arḍ Miṣr; H1. of No 568
Ifhām ṭāifat al-yahūd; PH1. of No 487
K. fī ifrād al-maqāl fī amr al-aẓlāl; A4. of No 348
Ifshā' al-naba' 'an waḍ' madhbaḥ raf' al-waba'; M4. of No 1074
Ighāthat al-malhūf fī 'amal al-khusūf wa'l-kusūf; A1. of No 1231
K. fī iḥdāth al-nuqaṭ 'alā'l-khuṭūṭ 'alā nisab al-suṭūḥ; M25. of No 277
al-Iḥkām fī Uṣūl al-aḥkām li Tahāwīl al-sinīn wa al-Ayyām; A7. of No 1040
Iḥṣā al-'ulūm; PH1. of No 180
K. al-iḥtijāj fī ṣiḥḥat al-nujūm wa'l-aḥkām fīhā; A2. of No 234
Iḥyā' 'ulūm al-dīn; PH5. of No 415
Ijābat al-su'āl bi taqrīb al-a'māl; A2. of No 1119
Ijābat al-su'āl fī ma'rifat 'amal al-hilāl 'alā ṭarīq al-jadāwil; A5. of No 1214
Ijābat al-su'āl fī ma'rifat 'amal al-hilāl 'alā ṭarīq al-jadāwil; A10. of No 1214
M. fī ijārāt al-ḥufūr wa'l-abniya; Me1. of No 327
I'jāz al-ḥisāb; M1. of No 1233
K. fī i'jāz al-muhandisīn; M13. of No 487
R. fī Ijtinā' barāhīn al-'ulūm al-ḥisābiyya wa'l-a'mal al-jabriyya wa'l-misāḥiyya 'alā ashkāl al-ta'sīs min kitāb Uqlīdis; Princeton (Garr. 1062)
Ikhlāṣ al-naṣā'iḥ fī 'amal al-ṣafā'iḥ; A1. of No 848
K. fī ikhrāj khaṭṭayn mustaqīmayn min nuqṭatayn mafrūḍatayn yuḥiṭān bi-zāwiya wa ikhrāj thalāthat khuṭūṭ min thalāthat nuqaṭ; M52. of No 296
Fī ikhrāj khaṭṭ mustaqīm ilā khaṭṭ mu'ṭan min nuqṭa mu'ṭāt bi-ṭarīq al-taḥlīl wa'l-tarkīb wa wuqū' al-nuqaṭ wa ta'dīdihā wa iḥdāth al-zāwiya; M14. of No 296
Ikhrāj al-khaṭṭayn min nuqṭa 'alā zāwiya ma'lūma; M16. of No 277
R. fī Ikhrāj al-khuṭūṭ fi'l-dawā'ir al-mawḍū 'a min al-nuqaṭ al-mu'ṭāt; M11. of No 296
Fī ikhrāj al-khuṭūṭ min ṭaraf quṭr al-dā'ira ila'l-'amūd al-wāqi' 'alā khaṭṭ al-quṭr; Dublin (of Trinity College 3652/10)
Fī ikhrāj al-khuṭūṭ min ṭaraf quṭr al-dā'ira ilā'l-'amūd al-wāqi' 'alā khaṭṭ al-quṭr; M12. of No 296
K. fī ikhrāj mā fī quwwat al-asṭurlāb ilā'l-fi'l = Riyāḍat al-fikr wa'l-'aql fī ikhrāj mā fī quwwat al-asṭurlāb ilā'l-fi'l; A9. of No 348
K. ikhrāj fi'l-quwwa ilā'l-fi'l; E1. of No 9
R. fi'l-Ikhtilāf bayna al-Muwaqqitīn bi Mahrūsat al-Qāhira fī ḍabt Qawsay al-Nahār va al-Layl va Dā'irat al-Fajr wa'l-Shafaq; A20. of No 1004
Ikhtilāf mā bayna'l-ufq al-haqīqī wa'l-mar'ī; A2. of No 1385
Fī ikhtilāf dhawī al-faḍl fī Istikhrāj al-'arḍ wa'l-mayl; G11. of No 348
K. ikhtilāf al-manāẓir; Cairo (Riyad. 260/2)
Ikhtilāf-i khuṭūṭ al-ashkāl; Tehran (Sipahsalar 109)
Fī anna ikhtilāf al-qisiy al-mutasāwiyya al-qarība min al-dawra a'ẓam min al-ba'īda 'anhā; M1. of No 270
K. fī ikhtilāf al-ṭūl; G3. of No 103
K. ikhtilāf al-ṭulū'; A1 of No 122
Fi'l-ikhtilāf al-wāqi' fī taqāsīm al-aqālīm; G18. of No 348
(K.) (M.) (fī) ikhtilāf al-zījāt; A23. of No 88; A2. of No 100
R. dar ikhtiṣār-i da'āwī-yi maqāla-yi ūlā az kitāb-i Uqlīdis; M3. of No 593

Ikhtiṣār da`āwi al-maqāla al-ūlā min kitāb Uqlīdis; M2. of No 277

Ikhtiṣār da`āwī al-maqālatayn al-ūlā wa'l-thāniyya min K. al-uṣūl li-Uqlīdis; M2. of No 593

Ikhtiṣār Dawr al-`Uṭāridı; A1. of No 639

Ikhtiṣār al-jabr wa'l-muqābala; M1. of No 587

Ikhtiṣār jadval-i Salih Efendi; A9. of No 1384

K. ikhtiṣār jadwalayn fi'l-handasa; M3. of No 204

Ikhtiṣār kitāb Arisṭ [ūṭ]ālīs fi'l-ma`mūr min al-arḍ; G1. of No 282

K. ikhtiṣār al-Majisṭı; Berlin (State 5634)

Ikhtiṣār risāla fi'l-`amal bi rub` al-muqanṭarāt; A17. of No 873

Ikhtiṣār li Sharḥ Ibn al-Bannā `alā Manẓūma Abī Muqri`; A1. of No 851

Ikhtiṣār sharḥ al-maqāla al-`āshira min kitāb Uqlīdis; M2. of No 193

Ikhtiṣār fī Uṣūl Uqlīdis; M2. of No 423

Ikhtiyārāt al-`Alā'iyya; A2. of No 535

K. al-Ikhtiyārāt `ala'l-buyūt al-ithnā `ashar; A4. of No 50

Ikhtiyārāt-i Muẓaffarı; A2. of No 668

Ikhtiyārāt al-nujūm; A26. of No 606

Ikhtiyarāt-ı qamar; A6. of No 1332

Ikhtiyārāt-i qamar fī burūj-i ithnay `ashara = Ikhtiyārāt-i masīr al-qamar; A27. of No 606

Ikhtiyārāt-i Sanjarī; Tehran (Majlis 147/2)

Ikmāl al-riyāḍī = Ikmāl al-Aṣīlī; M1. of No 612

K. al-iklīl; E1. of No 173

al-Iksīr fī ṣinā`at al-taksīr; M1. of No 702

Ilāhiyāt; PH1. of No 485

K. fi'l-`Ilal; A3. of No 11

K. al-`Ilal; A7. of No 27

`Ilal ḥisāb al-jabr wa'l-muqābala; M4. of No 309

K. fī `Ilal kusūf al-shams wa'l-qamar; A20. of No 103

`Ilal zīj Ja`far al-mukannā bi-Abī Ma`shar; A38. of No 348

`Ilal al-zījāt; A9. of No 205

K. `Ilal al-zījāt; A1. of No 107; A1. of No 306

I`lām al-`Ibād bi `Ilm al-ab`ād fī jughrāfiyā; G1. of No 990

I`lām al-`Ibād fī A`lām al-Bilād; A17. of No 990

al-`Ilām bi Shadd al-Bankām; A37. of No 888

R. al-I`lām bi shadd al-binkām; Me1. of No 888

Ilāqa bayna'l-falsafa wa'l-milla; PH12. of No 180

Ilf al-raiḍ fi'l-farāiḍ; M3. of No 751

al-Ilhām al-muqaddas min al-fayḍ al-aqdas; A1. of No 1145

Ilḥāqāt al-Nuzha; A7. of No 802

R. fi'l-`Illa al-fā`lla li'l-madd wa'l-jazr; Mt1. of No 79

R. fi'l-`Illa allatī laha qīla anna al-nār wa'l-hawā wa'l-mā` wa'l-arḍ `anāṣr li jamī` al-kāina al-fāsida wa ḥuṣṣa bi-dhālika dūna ghayrihā min al-kā'ināt; Ph8. of No 79

R. fī `Illa ikhtilāf al-azmān fi'l-sana; A8. of No 79

K. al-`Illa fī kusūf al-shams wa'l-qamar; A1.of No 101

R. fī `Illat al-lawn al-azraq alladhhī yurā fi'l-jaww fī jihat al-samā; Ph7. of No 79

M. fī `Illat `alāmāt al-burūj fi'l-zījāt min ḥurūf al-jumal; A42. of No 348

K. fī `Illat istinārat al-kawākib ma`a annahā wa'l-kurāt al-ḥāmila lahā min jauhar wāḥid basīṭ; A1. of No 282

Fī `Illat jadhb maghnāṭis al-ḥadīd; Ph6. of No 142

M. fī `Illat al-jidhr wa iḍ`āfihī wa naqlihī; M35. of No 328

R. fī `Illat al-nawm wa'l-ru'ya wa mā tarmuzu bihī al-nafs; PH2. of No 79

Fī `Illat taḥarruk al-falak `alā istidāra; A5. of No 142

K. fī `Illat tanṣīf al-ta`dīl `Inda aṣḥāb al-Sindhind; A16. of No 299

R. fī `Illat al-thalj wa'l-bard wa'l-barq wa'l-ṣawā`Iq wa'l-ra`d wa'l-zamharīr; Mt2. of No 79

R. dar `Ilm-i a`dād; M1. of No 0139

R. dar `Ilm-i a`dād-i wafq; M1. of No 0283

`Ilm-i aflāk; Baku (Institute of Manuscripts A 413)

R. fī `Ilm aḥkām al-nujūm; A2. of No 1044

`Ilm ashkāl quṭu` al-makhrūṭāt wa ashraf al-manāzil wa a`lā al-marātib min `Ilm al-handasa = K. taṣaffuḥ al-Makhrūṭāt; M1. of No 499

(R.)(al-) (K.) (Dar) Fī `Ilm al-asṭurlāb; A1. of No 451; A1. of No 825; Leiden (University 992); Tashkent (Institute for Oriental Studies 1207/2); Tashkent (Institute for Oriental Studies 3042/2); A9. of No 1058; A7. of No 1176.

R. fī `Ilm awsām al-nujūm; A1. of No 0279

Fī `Ilm al-aẓlāl; A1. of No 754

Fī `Ilm al-binkāmāt; Me1. of No 1004

R. dar `Ilm-i burj [wa] muqanṭar; A1. 048

(R.)(K.) fī `Ilm al-falak; A1. of No 94; Baghdad (of Ya`qub Sarkis 118); Kaduna (Jos Museum and Lugard Hall 935); Leiden (University 1021/1.); A1. of No 013; A3. of No 1032; A22. of No 990.

Fī `Ilm al-falak wa'l-nujūm; Kaduna (Jos Museum and Lugard Hall 750)

`Ilm-i farāiḍ; M7. of No 749

R. fī `Ilm al-ḥarf wa'l-wafq; M1. of No 1134

(R.) (fī) `Ilm al-hay`a; Oxford (Bodleian Pers. 1 299); Princeton (Yehuda 669); A2. of No 1390; A4. of No 808; A3. of No 595; St. Petersburg (Institute of Oriental B 4214, 4246.); A1. of No 0171

Fī `Ilm al-hay`a al-jāmi`; A11. of No 308

`Ilm al-hay'a wa'l-rub` al-mujayyab; A1. of No 0195

(K.) (fī) (R.) (dar) `Ilm-i hay`a(t); A2. of No 595; A1. of No 845; (Madras Mysore 812); Hyderabad (Central State Jadid 2668)

R. fī `Ilm hay'at al-kawākib wa maqādir ab`ādihā; Cairo (Hay'a 45)
Fī `Ilm al-hay'a wa ma`rifat kayfiyyatihī; A12. of No 308
K. dar `Ilm-i hay'at; Tashkent (Institute for Oriental Studies 9344/1)
`Ilm -i hay'at; Dushanbe (Institut-i Zabon u Adabiyot 202/2.).
`Ilm -i hay'at-i qadīm Dushanbe (Institute of Oriental Studies 2005)
(R.) (K.) (fī) (dar)`Ilm -i ḥisāb; M2. of No 918; M3. of No 1058; Dushanbe (Ferdowsi 332/2); Dushanbe (Institut-i Zabon u Adabiyot 202/3); Baku (Institute of Manuscripts B 675/5, 5545/5); Moscow (State 87/1); M2. of No 1026; Berlin (State 6004); Berlin (State Pers. 81/6); Kazan (University 12.); M2. of No 845; M1. of No 1198; Aligarh (Azad Subhanallah Sup. 511/7); Dushanbe (Institut-i Zabon u Adabiyot 101/10, 125); Hyderabad (Salar Jung Riyad. 6. = Aligarh Azad. Subh. Sup. 511/7); M1. of No 1286; St. Petersburg (University 406.); M1. of No 0127; M1. of No 0153; M1. of No 099; M4. of No 783; Baku (Institute of Manuscripts B 16/7, M 15/6); Baku (Institute of Manuscripts M 151/6); Ghurf City (al-Habshi).
R. fī `Ilm al-ḥisāb bi'l-fārisiyya; Baghdad (Institute of Islamic Research 91/1)
R. fī `Ilm al-ḥisāb al-miyāh al-jāriya fī madīnat al-Dimashq; G3. of No 813
R. fī `Ilm ḥisāb al-nujūm; A38. of No 990; A16. of No 990
`Ilm-i ḥisāb u raqūm-i siyāq-i hindī; Bombay (Asiatic Society 27)
R. fī `Ilm al-ḥisāb wa'l-qalam; Vienna (Academy 326)
`Ilm ḥudūd al-`ālam; A2. of No 0279
`Ilm al-ḥurūf wa'l-awfāq; M3. of No 1281
R. fī `Ilm al-jabr wa'l-muqābala wa'l-ta`dīl, wa'l-talkmīl, wa'l-radd; Cairo (Khalil riyad. 2)
R. fī `Ilm al-Jabr wa'l-Muqabala; M2 of No 1348
R. fī `Ilm al-jayb; A2. of No 983
R. dar `Ilm-i kura wa ṭarīq-i `amal = Chihil bāb dar ma`rifatt-i kura; A1. of No 1388
`Ilm manāẓir al-nujūm; A3. of No 94
R. fī `Ilm al-manāẓir wa'l-marāyā; St. Petersburg (National Khanykov 144/11)
R. fī `Ilm al-mīqāt wa madākhil al-shuhūr; A1. of No 1279
(R.) (K.) fī `Ilm al-mīqāt; A1. of No 0146; Gotha (1453.); A6. of No 1134
R. (fī)(dar) `Ilm-i misāha(t) ; M1. of No 086; (Cambridge University Sup. 436/2); M7., M8. of No 1058; Baghdad (Waqfs 2963); M5. of No 696; Berlin (State 5954)
`Ilm al-mūsīqā = Fī'l-mūsīqā = `Ilm ṣinā`at al-mūsīqā = al-Madkhal ilā ṣinā`at al-mūsīqā; Mu1. of No 317
K. fī `Ilm al-mūsīqā al-mawsum bi'l-adwār; Oxford (Bodleian I 1026/1)
K. `Ilm al-nabakāt wa'l-asṭurlāb; Kazan (University 1072)
(R.) (dar) (K.) (fī) `Ilm al-nujūm; Tarim (Hills of Yemen al-Husayn 65); Dushanbe (Institut-i Zabon u Adabiyot 202/6); Baku (Institute of Manuscripts A 366/9); Edinburgh (University 260.); A1. of No 386; Baghdad (Waqfs Sup. 326); Baghdad (Waqfs Sup. 328); Baku (Institute of Manuscripts B 5430/1)
`Ilm-i nujūm - hay'at; A1. of No 1314
Fī `Ilm al-nujūm qadr mā yaḥtāj ilā'l-nās; Berlin (State 5728)
`Ilm-i nujūm - tanjīm; A2. of No 1314
`Ilm-i nujūm u taqwīm; A3. of No 938
Fī `Ilm al-nujūm wa ḥisābihī; Baghdad (Waqfs Sup. 331)
R. fī `Ilm al-qabbān; Me1. of No 931; Me1. of No 1248; Princeton (Garr. 1062a)
`Ilm -i riyāḍī; Dushanbe (Institute of Oriental Studies 2895)
`Ilm riyāḍīdan - ḥisāb; M2. of No 1314
`Ilm riyāḍīdan - jabr; M3. of No 1314
`Ilm-i tanjim wa ma`rifat-i taqwim; A1. 0161
R. dar `Ilm al-tasṭīḥ; M1. of No 066
K. fī `Ilm mā fī'l-taqwīm bi'l-Mumtaḥan; A27. of No 103
`Ilm-i Uqlīdis; Tehran (University 2160/7)
R. fī `Ilm al-`urūḍ; M1. of No 489
R. dar `Ilm-i wafq; Edinburgh (University 259)
Fī `Ilm al-waqt; A7. of No 903
R. dar `Ilm-i waṣāyā; M2. of No 0166
K. li `Ilm al-Zayirja; A9. of No 983
R. fī `Ilm al-ẓilāl; A1. of No 670
Fī iltiqā' al-khaṭṭayn al-mustaqīmayn al-khārijayn min ṭarafay khaṭṭ mustaqīm `alā zāwiyatayn aqall min zāwiyatayn qā'imatayn = M. fī'l-burhan `alā annahu matā waqa`a khaṭṭ mustaqīm `alā khaṭṭayn mustaqīmayn mawḍū `ayn fī saṭḥ wāḥid ṣayyara al-zāwiyatayn al-dākhilatayn allatī fī jiha wāḥida anqaṣ min zāwiyatayn qā'imatayn; M2. of No 204
M. fī imārat al-iqbāl wa al-dawla; PH1. of No 142
R. fī imkān tāthlīth al-zawāyā; M2. of No 985
R. fī imkān tathlīth al-zawāyā; M1. of No 161
R. fī imkān wujūd al-khaṭṭayn alladhayn yaqtaribān abadan wa lā yaltaqiyān = R. fī ibānat al-khaṭṭayn; M1. of No 331
Imsākiye; A14. of No 1384
Imtiḥān; A5. of No 1108
R. fī imtiḥān al-ālāt wa'l-dawāir wa'l-khuṭūṭ fī'l-asṭurlāb; A1. of No 0211
R. fī imtiḥān al-munajjimīn; A6. of No 205

K. fī imtinā` al-jirm al-aqṣā min al-istiḥāla; Ph12. of No 79
K. fī imtinā` wujūd misāḥat al-falak al-aqṣā al-mudabbar li'l-aflāk; A16. of No 79
K. inbāṭ al-miyāh al-khafiya; Me1. of No 309
Fī inbi`āth li-taṣḥīḥ al-Qibla ;G16. of No 348
R. fī in`ikās al-shu`ā `āt wa in`Iṭāfihā; Ph2. of No 606
Inkishāf al-jilbāb fī funūn al-ḥisāb; M1.of No 865
R. fī inshā' al-muthallathāt al-qā'imat al-zawāyā al-munṭaqat al-aḍlā`; M2. of No 194
K. al-inshā' fī `Ilm al-jabr wa'l-muqābala; M3. of No 604
K. al-inṣāf;PH15. of No 317
Fī inqisām khaṭṭ mustaqīm bi-niṣfayn; M4. of No 204
al-Intifā' li Taṣḥīḥ al-Irtifā'; A8. of No 1040
Intikhāb al-ḥisāb; M1. of No 063
Intikhāb min al-manāẓir; Ph1. of No 736
Intikhāb-i `Umda; M2. of No 1397
M. fī intizā` al-burhān `alā anna al-qaṭ` al-zā'id wa'l-khaṭṭān alladhān lā yaltaqiyānihi yaqtaribān abadān wa lā yaltaqiyān; M10. of No 327
Inyat al-ḥisāb;Tashkent (Institute for Oriental Studies 2818/4)
R. fi'l-īqā`; Mu6. of No 79
R. fī iqāmat al-burhān `alā'l-dā'ir min al-falak min qaws al-nahār wa irtifā` niṣf al-nahār wa irtifā` al-waqt; A2. of No 256
`Iqd al-aḥādīth fī `Ilm al-mawārīth; M1. of No 560
`Iqd al-durar fi'l-`amal bi'l-qamar; A10. of No 815
`Iqd al-jawhar wa'l-lāl fī ma`rifat `amal al-hilāl; A4. of No 1214
`Iql al-jawhar fī rub` al-muqanṭar; A8. of No 1207
al-`Iqd al-manẓūm mā taḥtawī `alayhi al-ḥurūf min khawāṣṣ wa'l-`ulūm; Princeton (Garr. 1028)
al-`Iqd al-thamīn fī mā yata`allaqu bi'l-mawāzīn; Me1. of No 1367
al-`Iqd al-yamānī fī ḥall al-Zīj al-Ilkhānī; A6. of No 829
al-iqnā` fi'l-misāḥa; Istanbul (Süleymaniye AS 2715)
al-Iqrār al-dawrī idhā kāna li-ithnayn; M4. of No 815
al-iqtiṣār fī sabṭ al-kusūr; M1. of No 030
R. fī iqtirānāt al-kabākib; London (British 414/2)
Irad al-masā'il wa Iḍa ḥ al-majāhil fi'l-ḥisāb; Princeton (Yehuda 940)
Irshād al-`ajam li-a`māl al-judhūr al-aṣamm; M1. of No 888
Irshād al-arīb `alā ma`rifat al-adīb; HS1. of No 557
Irshad al-asṭurlāb; A4. of No 308; A2. of No 658
Irshād dhawī al-`Irfān ila ṣinā`at al-qabbān; Me2. of No 423
Irshād al-ḥā'ir ila takhṭīṭ faḍl al-dā'ir; A1. of No 815
Irshād al-ḥussāb fi'l-maftūḥ min `Ilm al-ḥisāb; M2. of No 584
Irshād li'l-`Ilm bi khawāṣṣ al-a`dād; M2. of No 1074
Irshād al-khill li taḥqīq al-sā`a bi rub` al-shu`ā ` wa'l-ẓill; A2. of No 1360
Irshād al-malhūf fī `amal al-khusūf wa'l-kusūf; A9. of No 1214
K. al-irshād ilā ma`rifat al-awqāt; A1. of No 023
al-Irshād fī ma`rifat subā`Iyāt al-a`dād; M1. of No 0271
Irshād al-qāṣid ilā asnā al-maqāṣid; E1. of No 703
Irshād al-sā'il ilā uṣūl al-masā'il; A21. of No 815
Irshād al-ṭālib ilā mutaṭawwaqī al-kawākib; A1. of No 1101
Irshād al-ṭullāb ilā `Ilm al-ḥisāb; Istanbul (Topkapı Sarayı 3144)
Irshād al-ṭullāb ilā Wasīla fi'l-ḥisāb; M7. of No 873
Irshād al-wazzān li-ma`rifat al-awzān bi'l-qabbān; Me3. of No 888
al-Irshād ilā mā yudrak wa mā lā yudrak min al-ab`ād; A45. of No 348
R.(-yi) (dar)irtifā`; A4. of No 1272; A2. of No 876
Irtifā`; A1. of No 028
Irtifā` a`ẓam al-jibāl; Baku (Institute of Manuscripts B 4403/3)
R.-yi irtifā`-i āftāb u sitāragān; Tehran (University 826)
R.-yi irtifā` al-jibāl; M2. of No 1259
Fī'l-Irtifā`; A1. of No 1260
Irtifā` al-shams `Inda ḥulūliha bi-ru'ūs al-burūj bi-Qurṭuba; A6. of No 312
Irtifā;`Tehran (Sipahsalar 145)
al-Is`āf al-atamm bi āḥāsin al-funūn min ḥisāb al-qalam; M1. of No 1036
K. al-is`āf `ala'l-ikhtilāf fī ḥisāb al-izdilāf; M1. of No 1132
Īsāghūjī; PH1. of No 595
K. ila Isḥāq ibn Ḥunayn; A10. of No 103
R. bi'l-ishāra al-fatḥiyya fi'l-`amal bi'l-rub` al-shakāziya; A1. of No 1216
al-Ishārāt; A10. of No 750
al-Ishārāt al-`Imādiyya fi'l-mawāqīt al-shar`Iyya; A27. of No 750
al-Ishārāt fi'l-`amal bi'l-jayb al-mawḍū ` `alayhi al-madārāt; A21. of No 842
al-Ishārāt `ala rub` al-muqanṭarāt; A19. of No 873
Ishārāt wa tanbīhāt; PH4. of No 317
K. al-ishbā` fī sharḥ al-shakl al-qaṭṭā`; M4. of No 341
R. fi'l-`Ishq; PH7. of No 317
Iṣlāḥ K. Aqāṭun fi'l-uṣul al-handasiyya; M1. of No 169
R. fī iṣlāḥ fasād al-qabbān; Me2. of No 888
Iṣlāḥ ḥarakāt al-kawākib; A1. of No 384
Iṣlāḥ al-Isṭuqsāt, Iṣlāḥ Uṣūl Uqlīdis; M2. of No 595
Iṣlāḥ al-Majisṭī = K. al-hay'a wa-huwa talkhīṣ kitāb al-Majisṭī; A1. of No 448

Iṣlāḥ al-Majisṭī; A1. of No 114
Iṣlāḥ K. al-Makhrūṭāt li-Abulūniyūs; M7. of No 74
Iṣlāḥ K. al-makhrūṭat; M9. of No 194
Iṣlāḥ K. Mānālāus fi'l-ashkāl al-kuriyya; M3. of No 635; M5. of No 82
Iṣlāḥ K. Manālāus fi'l-Kuriyyāt; M1. of No 299
Iṣlāḥ al-manāẓir; Ph1. of No 79
Iṣlāḥ al-maqāla al-ūlā min kitāb Abulūniyūs fi qaṭ' al-nisba al-maḥdūda; M25. of No 103
Iṣlāḥ ta'dīl al-Mirrīkh; A14. of No 308
M. fī iṣlāḥ shakl Manālāus fī kuriyyāt; M4. of No 299
R. fī iṣlāḥ K. Uqlīdis; M22. of No 79
Iṣlāḥ K. al-uṣūl; M2. of No 43
Iṣlāḥ K. al-Uṣūl= K. uṣūl al-handasa li-Uqlīdis; M1. of No 103
Iṣlāḥ wa tahdhīb limā naqalahu min K. Yūsuf al-Qass min al-suryāniyya ilā'l-'arabiyya min K. Arshimīdis fi'l-muthallath; M3. of No 169
al-Istī'āb fī al-'Amal bi Ṣadr al-'Iwazz wa Janāḥ al-Ghurāb; A38. of No 888; A34. of No 873
al-istī'āb fī'l-hay'a; Istanbul (Süleymaniye AS 2576)
al-Istī'āb fī'l-ḥisāb; M1. of No 545
Istī'āb al-wujūh al-mumkina fī ṣan'at al-asṭurlāb; A5. of No 348
K. al-istibṣār fī mā tudrikuhu al-abṣār; Ph1. of No 631
R. fī istiḍā'at al-ḍaw'; Ph5. of No 317
Istidrāk 'alā mas'ala min Zīj al-ṣafā'iḥ; A6. of No 299
Istidrāk al-shakk fī'l-shakl al-rābi' 'ashar min al-maqāla al-thāniya 'ashara min K. al-Uṣūl; M16. of No 296
R. fī Istikhrāj al-ab'ād bi dhāt al-shu'batayn; A2. of No 79
R. fī Istikhrāj al-a'dād al-muḍmara; M1. of No 79
M. fī Istikhrāj al-'adad al-muḍmar; PH7. of No 198
M. fī Istikhrāj al-a'dād al-mutaḥābba bi-suhūlat al-maslak ilā dhālika = K. fī'l-a'dād al-mutaḥābba; M7. of No 103
Istikhrāj al-ajdhār al-mutaḍā 'afa al-mutawāliyya bi-jihat aḍlā' al-muḍalla'āt; Paris (Pers. 772/17)
Istikhrāj-i 'arḍ-i iqlīm-i ru'yat; Tehran (University 4883/3)
Istikhrāj-i a'māl-i falakiyya; A5. of No 1332
R.-yi Istikhrāj-i awḍā '-i kawākib; A1. of No 0158
R. fī Istikhraj Awqāt al-Ṣalāt wa Shay' min al-Tawārīkh wa al-A'māl al-Falakiya min Ghayri al-ālāt; A9. of No 1006
M. fī Istikhrāj al-awtār fī'l-dā'ira bi-khawāṣṣ al-khaṭṭ al-munḥanī fīhā; M4. of No 348
M. fī Istikhrāj mā bayna'l-baladayn fī'l-bu'd bi-jihat al-umūr al-handasiyya; G1. of No 327
Istikhrāj bu'd mā bayna'l-markazayn min al-Majisṭī; A2. of No 299
R. fī Istikhrāj bu'd markaz al-qamar min al-arḍ; A11. of No 79
Istikhrāj bu'd samt faḍl al-dā'ir 'alā khaṭṭ zawāl al-balad; A47. of No 873
K. Istikhrāj ḍil' al-muka'ab wa māl al-māl wa mā yatarakkabu minhumā; M9. of No 256
R. fī Istikhrāj ḍil' al-musabba' al-mutasāwī al-aḍla' fī'l-dā'ira; M9. of No 277
Istikhrāj-i ghāyat-i ta'dīl-i qamar; Tehran (University 4883/2)
M. fī Istikhrāj irtifā' al-quṭb 'alā ghāyat al-taḥqīq; A8. of No 328
R. fī Istikhrāj jayb daraja wāhida bi a'māl mu'assasa 'alā qawāid ḥisābiyya wa handasiyya 'ala tariqa Ghiyāth al-din al-Kāshi; M1 of No 816
Dar Istikhrāj-i jayb u sahm; M4. of No 938
R. fī Istikhrāj al-jihāt al-arba' bi'l-rub' al-mujayyab; A7. of No 1006
Fī Istikhrāj al-ka'āb wa aḍlā' mā warā'ahu min marātib al-ḥisāb; M11. of No 348
R. fi istihraj kammiyyat al-ajraæm al-mukhtalita; Ph1. of No 0152
R. fī Istikhrāj kayfiyyat al-'amal bi'l-asṭurlāb al-qamarī al-musaṭṭaḥ; Madras (Mulla Firuz 86/3)
Fī Istikhrāj khaṭṭ mustaqīm ilā'l-khaṭṭayn al-mustaqīmayn al-mafrūḍayn; M13. of No 296
M. fī Istikhrāj khaṭṭ niṣf al-nahār 'ala ghāyat al-taḥqīq; A12. of No 328
Fī Istikhrāj khaṭṭ niṣf al-nahār bi-ẓill wāḥid; A15. of No 328
Fī Istikhrāj khaṭṭayn bayna khaṭṭayn mutawāliyayn mutanāsibayn bi ṭarīq al-handasa al-thābita; M4. of No 194
R. fī Istikhrāj khaṭṭ niṣf al-nahār; A9. of No 808
R. fī Istikhrāj khaṭṭ niṣf al-nahār wa samt al-Qibla; A10. of No 808
R. fī Istikhrāj khaṭṭ niṣf al-nahār wa samt al-Qibla bi'l-handasa; G1. of No 79
R. dar Istikhrāj-i khaṭṭ-i niṣf al-nahār; A5. of No 1069; Oxford (Bodleian Pers. I 2736)
K. Istikhrāj khaṭṭ niṣf al-nahār min K. Anālīmā wa'l-burhān 'alayhi; A1. of No 83
R. dar Istikhrāj-i khaṭṭ-i niṣf al-nahār wa ma'rifatt-i Qibla; A6. of No 1069
R. fī Istikhrāj khaṭṭayn bayna khaṭṭayn ḥattā tatawālā al-arba'a 'alā nisba wa qismat al-zāwiya bi-thalāthat aqsām mutasāwiyya; M14. of No 277
R. fī Istikhrāj-i khusūf-i qisī; Hyderabad (Sa'Idiyya Hay'a 39/3)
Istikhrāj-i kusūf-i āftāb ba ṭul-i Kāshān; A7. of No 1069
R. fī Istikhrāj al-layl wa'l-nahār min rub' al-dā'ira al-musammāt bi'l-rub' al-mujayyab; A4. of No 1006
R. fī Istikhrāj majhūlāt al-'adadiyya; M4. of No 698

R. fī Istikhrāj al-majhūlāt al-`adadiyya bi-ṭarīq al-jabr wa'l-muqābala; Ashqabad (2537/2)
R. dar Istikhrāj-i majhūlāt az ṭarīq-i jabr u muqābala; M6. of No 749
R. fī Istikhrāj maqādīr al-zawayā min maqādīr al-aḍlā` fi'lmuthallathāt al-ghayr qā'imat al-zawāyā al-ḥāditha min qisiyy al-dawā'ir al-`Iẓām; M8. of No 845
R. fī Istikhrāj al-masāil `adadiyya min al-maqāla al-thālitha min Uqlīdis; M7. of No 118
Fī Istikhrāj misāḥat al-mujassam al-mukāfi'; M17. of No 277
R. fī Istikhrāj al-mīqāt; A1. of No 0191
Istikhrāj al-muwassaṭayn wa qismat al-zāwiya al-mustaqīma bi-thalāthat aqsām mutasāwiyya bi-ṭarīq al-handasa; M37. of No 296
M. fī Istikhrāj qadr al-arḍ bi-raṣad inḥiṭāt al-ufuq `an qimam al-jibāl; G4. of No 348
R. fī Istikhrāj ru'yat al-hilāl; A8. of No 990
R. fī Istikhrāj al-sā`āt `alā niṣf kura bi'l-handasa; A17. of No 79
Fī Istikhrāj sā`āt mā bayna ṭulū` al-fajr wa ṭulū` al-shams kulla yawmin min ayyām al-sana bi-madīnat Qāin = R. fī Istikhrāj sā`āt mā bayna ṭulū` al-fajr wa ṭulū` al-shams aw ghurūbihā wa ghurūb al-shafaq idh al-`Ilm bi-aḥadayhimā yastalzimu al-`Ilm bi'l-ākhar; A1. of No 346
R. fī Istikhrāj sā`āt al-basṭ wa sā'ir awqāt al-layl wa'l-nahār; A2. of No 189
M. fī Istikhrāj samt al-Qibla fī jamī` al-maskūna bi-jadāwil wuḍi`at lahā; A2. of No 327
(R.) (fī) Istikhrāj samt al-Qibla; A1. of No 268; A1. of No 593; A3. of No 277
R. fī Istikhrāj shukūk al-mujassamāt min kitāb Uqlīdis - tatimmat kitāb Irūn; M18. of No 328
M. fī Istikhrāj ta`dīl al-nahār wa sā`at al-mashriq wa al-dā'ir min'l-falak bi ṭarīq al-handasa; A3. of No 635
Istikhrāj dar ṭalab `amr wa haylāj; A5. of No 301
M. fī Istikhrāj tanāsub al-a`dād al-sitta; Tehran (University 1751/4)
Dar Istikhrāj-i taqāwīm; A1. of No 064
Istikhrāj-i taqwīm [wa] aḥkām-i nujūm; A3. of No 1104
R. Istikhrāj-i taqwīm; Hyderabad (Central State Riyad. 183)
R. fi Istikhrāj al-ta'rīkh; A25. of No 750
Istikhrāj ta'rīkh al-yahūd; H1. of No 346
R. fī Istikhrāj ta`rīkh al-yahūd wa a`yādihim; H1. of No 41
R. fī Istikhrāj watar al-musabba`; M2. of No 268
Istikhrājāt; A3. of No 1332; A11. of No 1332
K. al-istikmāl al-manāẓir; Ph1. of No 391
K. al-istikmāl; M1. of No 391
Iṣṭilāḥāt al-taqwīm; A3. of No 1417
Iṣṭilāḥāt-i ḥalqa-yi Iskandarī; Tabriz (Milli - National 93/2)
K. fī isti`māl al-`adad al-hindī; M13. of No 79
K. fī isti`māl al-`adad al-qiyāsī; M14 of No 79
Fī isti`māl al-asṭurlāb al-kūrī; A49. of No 348
K. fī isti`māl dawā'ir al-sumūt li-Istikhrāj marākiz al-buyūt; A46. of No 348
K. fī isti`māl al-Mumtaḥan; A23. of No 103
K. fi'l-istiqrā`; M14. of No 309
K. al-istiqṣā wa'l-tajnīs fī `Ilm al-ḥisāb = K. al-istiqṣā fi'l-jabr wa'l-muqābala; M3. of No 278
K. istiqṣā fī sharḥ ṭuruq al-ḥisāb fī masā'il al-waṣāyā min ḥisāb al-jabr wa'l-muqābala wa ṭuruq al-handasa wa'l-`amal bi-ṭarīq al-khaṭa'ayn wa'l-dīnār wa'l-dirham; M4. of No 278
Istiqṣār `Ilm al-mūsīqā; Mu3. of No 180
K. al-istishhād bi-ikhtilāf al-arṣād; A52. of No 348
R. fi'l-istiwā; A2. of No 169
Itḥāf al-ḥuḍūr; Manchester (Rylands Lindesiana 446a)
Itḥāf al-ḥabīb (al-muḥib) bi-ma`rifat al-tawqī`āt wa'l-awqāt wa'l-Qibla bi'l-taqrīb; A8. of No 1017
Itḥāf al-muḥib bi-ma`rifat al-tawqī`āt wa'l-awqāt wa'l-Qibla bi'l-taqrīb; Jakarta (State Sup. 632)
al-Itḥāf `alā Nubdhat al-is`āf; A7. of No 1323
R. dar ithbāt-i ḥarakat-i shams; A1. of No 1213
R. fī ithbāt ḥarakat al-shams wa sukūn al-arḍ; A5. of No 1262
Fī ithbāt ṭabī`at al-mumkin; PH1. of No 198
K. fī i`tibār miqdār al-layl wa'l-nahār bi ṭarīq tab`udu `an muwāḍa`āt al-munajjimīn wa al-qābihim; A53. of No 348
al-I`tibārāt al-naẓariyya fi'l-aḥkām al-nujūmiyya; A1. of No 784
Fi'l-i`tirāḍ `ala kitāb Ibn Sīnā Ḥujjat al-Ḥaqq; PH2. of No 348
Ithnā `ashara masā'il jāmi`a li uṣūl masā'il al-iqrār bi'l-dayn al-majhūl al-dawrī; M15. of No 783
Itmām al-dirāya; E2. of No 896
K. ittifāq al-falāsifa wa ikhtilāfihim fī khuṭūṭ al-kawākib; A4. of No 27
Ittiṣālāt-i sitārān; Tehran (Sipahsalar 54)
Iwān al-Naḥwī; PH10. of No 180
`Iyāriyya; Me2. of No 1204
Iẓhār al-`ajā'ib min al-asṭurlāb al-ghā'ib fī `Ilm al-mīqāt; A1. of No 742
Iẓhār al-asrār fī ḥall risāla fī hay'a; A4. of No 1002
Iẓhār al-sirr al-mawḍū ` fi'l-`amal bi'l-asṭurlāb; Sarajevo (Ghazi Husrev Beg 137/10)
Iẓhār al-sirr al-mawḍū ` fi'l-`amal bi'l-rub` al-maqṭū`; A14. of No 873

Iẓhār ma kāna mustakhfiyan fī aḥkām al-nujūm; A1. of No 580
al-R. al-`Izziyya fi'l-ḥisāb al-hawā'ī ; M4. of No 589

-J-

R. fi'l-jabr; Mosul (Ahmadiyya Mosque 302)
R. fi'l-jabr wa'l-khaṭa'ayn; M1. of No 0254
K. fi'l-jabr = Ḥisāb al-suṭūḥ; M1. of No 124
(K.) (M.)R. (dar)(fi'l-) (al-)jabr (wa) (u) muqābala; M2. of No 459; M2. of No 666; M5. of No 527; St. Petersburg (Institute of Oriental C 1330); St. Petersburg (Institute of Oriental D 347/2); M1. of No 1410; Tehran (University 3337/11); Tehran (University 1959); M1. of No 755; M6. of No 696; M1. of No 038; M1. of No 0183; Hyderabad (Central State Riyad. 124); Tehran (University 874); Tashkent (Institute for Oriental Studies 3275/2); Damascus (al-Zahiriyya 3087); M1. of No 225; M1. of No 48; M1. of No 50; M1. of No 59; M1. of No 97; M2. of No 315.
Jabr u muqābala u `ilm-i majhūlāt; Baku (Institute of Manuscripts B 488/1-3, 4403/4)
R. dar jabr u muqābala u qawā`id-i istikhrāj-i majhūlāt-i `adadiyya = Jabr u muqābala = Sharḥ-i Mīzān al-ḥisāb = Takallama risāla al-jabr wa'l-muqābala li'l-Qushjī; M1.of No 1021
al-Jadāwil; A4. of No 813; Baku (Institute of Manuscripts D 2120/3)
Jadāwil awā'il al-sinīn al-`arabiyya; Berlin (State 5781/2)
Jadāwil awsaṭ al-Kavākib; A20. of No 1323
Jadāwil al-burūj; St. Petersburg (Institute of Oriental B 4077)
Jadāwil al-dā'ir wa faḍlihī wa'l-samt; A6. of No 764
Jadāwil daqā'iq masīr al-qamar; Princeton (Garr. 1027)
Jadāwil faḍl al-dā'ir al-munḥarifāt; Berlin ((IGMN)II. 61)
Jadāwil faḍl al-dāir; Istanbul (Nuruosmaniye 2903)
Jadāwil faḍl al-dā'ir min qibal al-irtifā`; A6. of No 283
Jadāwil Faḍl Dā'ir al-Shams wa Zuḥal wa'l-Mushtarī wa'l-Marīkh wa al-Zuhra wa `Uṭārid wa Jadāwil Ukhrā fi'l-Ḥisāb; A4. of No 1341
al-Jadāwil al-falakiyya; A1. of No 1016; Beirut (University of St.Joseph 201)
Jadāwil Ghāyat al-İrtifā` wa al-Dā'ir min al-Ẓuhr ilā al-`Aṣr wa min al-`Asr ilā al-Ghurūb wa Ḥiṣṣat al-Fajr wa'l-Maṭāli` al-Baladiyya wa Niṣf Qaws al-Nahār wa al-Tawārīkh al-`Arabiyya wa al-Qibṭiyya; A4. of No 1052
Jadāwil al-ghurbal fī bayān al-a`dād al-murakkaba; M3. of No 1355
Jadāwil fī al-Hay'a; A2. of No 1384
Jadāwil Ḥisas mā bayna al-Markaz li al-Dā'ir wa ikhtilāf al-Manẓar `alā uṣūl Ulugh Beg; A17. of No 1323
Jadāwil ikhtilāf al-ṭūl wa al-`arḍ wa'l-ta`dīl `alā ra'y Ulugh Beg; A9. of No 1018
Jadāwil ikhtilāf manẓar al-qamar; A3. of No 1018
Jadāwil al-irtifā'; A3. of No 1384
Jadāwil I`tidāliyya; Istanbul (Nuruosmaniye 2904)
Jadāwil fi'l-ta`dīl; Fas (Zawiya 2b)
Jadāwil al-jayb al-maḥlūl daqīqa daqīqa; M3. of No 421
Jadāwil li ma`rifat daqā'iq ikhtilāf mā bayna ufuqayn; A10. of No 1018
Jadāwil li-ma`rifat ruy'at ahillat al-shuhūr; A1. of No 1005
Jadāwil li-waḍ` faḍl al-dā'ir; A1. of No 988
Jadāwil al-maḥlūl al-thānī `alā uṣūl Ulugh Beg; A21. of No 888
Jadāwil maḥlūl al-maṭāli` al-falakiyya; A2. of No 1018
Jadāwil Maḥlūl al-Sahm `alā Uṣūl Ulugh Beg; A18. of No 1323
Jadāwil al-maṭāli` al-falakiyya min awwal al-jady maḥsūba min awwal al-ḥamal ilā ākhir al-jawzā' maḥlūla daqīqa daqīqa `alā thalath marātib; A11. of No 1018
Jadāwil maṭāli` al-falak al-mustaqīm min awwal al-Ḥamal maḥlūla daqīqa daqīqa; A2. of No 649
Jadāwil mīqātiyya; A1. of No 1350
Jadāwil mīqātiyya; A10. of No 715
Jadāwil mukhtalifa fi'l-hay'a; Tashkent (Institute for Oriental Studies 467/4)
Jadāwil al-Mūl al-Thānī Daqā'iq Ulugh Beg; A19. of No 1323
Jadāwil al-munḥarifāt; A4. of No 1243
Jadāwil al-munḥarifāt al-maḥsūba ilā ṣād daraja; A1. of No 929
Jadāwil al-Muqanṭara; A4. of No 1384
Jadāwil Muqawwimāt al-Manāzil li Awwal al-Sana 977; A3. of No 1040
Jadāwil mushtamila `alā istikhrāj al-ta`rīkh al-qibṭī min al-ta'rīkh al-`arabī bi'l-ḥisāb; A4. of No 1160
Jadāwil mushtamila `alā istikhrāj darajat al-shams min al-ta'rīkh al-qibṭī; A5. of No 1160
Jadāwil al-nisbatayn al-sittīniyya `alā'l-tamām wa'l-kamāl; (Munich 866)
Jadāwil fī rasm al-munḥarifāt `alā'l-ḥīṭān bi ṭarīq sahl ḥasan lam yusbaq ilayhi; A4. of No 873
Jadāwil al-shams; A4. of No 1323
Jadāwil al-shams min mashriq al-fajrayn fī taqwīm al-qamarayn; Gotha (1380/1)
Jadāwil shatti = al-Zīj; A6. of No 1323
Jadāwil siḥḥītiyya li'l-kawākib al-thābita li sanat 1061; A1. of No 1235

Jadāwil siḥḥītiyya li'l-kawākib al-thābita li sanat 1114; A2. of No 1235
Jadāwil Siḥḥitiyāt li'l-Kawākib al-Thābita li sanat 1114; A3. of No 1235
Jadāwil al-sumūt; A12. of No 815
Jadāwil ta`ādīl al-qama;r A22. of No 888
Jadāwil ta`dīl Zuḥal; A11. of No 815
Jadāwil fī al-Tanjīm; A33. of No 888
Jadāwil fī Taqwīm al-Shams wa fī al-sinīn al-Qibtiyya wa al-`Arabiyya wa ghayr Zālik; A2. of No 1055
Jadāwil al-taqwīm; A5. of No 1384; Istanbul (Nuruosmaniye 2914)
Jadāwil al-ẓill al-mabsūṭa al-ithnay `ashara maḥlūl daqīqa daqīqa `alā martabatayn; A3. of No 189
Jadāwil Zīj Zaqūṭū; A1. of No 746
al-Jadwal; A2. of No 1368
al-Jadwal al-āfāqī; A1. of No 764
Jadwal `amal al-layl wa'l-nahār li `arḍ Dimashq; A9. of No 764
Jadwal Asmā' al-Kawākib wa Maṭāli`ihā wa Ab`ādihā wa Maqādīrihā wa Darajātihā; A5. of No 1134
Jadwal-i `aẓam; Dushanbe (Institute of Oriental Studies 2219)
Jadwal al-bāqī li'l-`aṣr li `arḍ Miṣr; A1. of No 801
Jadwal al-dā'ir al-āfāqı; A25. of No 888
Jadwal al-dā'ir wa faḍlihī li `arḍ Dimash ; A3. of No 764
R. fī jadwal al-daqā'iq; A7. of No 299
Jadwal faḍl al-dā'ir li `arḍ Dimashq; A4. of No 764
Jadwal faḍl al-dā'ir wa `amal al-layl wa'l-nahār; A8. of No 764
Jadwal al-Farghānī `alā quṭr al-jady; A5. of No 67
Jadwal al-Farghānī; A4. of No 67
Jadwal habṭaq ai-qamar; A2. of No 1052
Jadwal-i idṭiraāt-i ayām-i qamarī; Dushanbe (Ferdowsi 1618)
Jadwal irtifā` al-kawākib al-thābita `inda ṭulū` al-fajr; A4. of No 829
Jadwal irtifā` al-shams; A1. of No 735
Jadwal fī istikhrāj al-ta'rīkh al-`arabī wa'l-qibṭı; A6. of No 1042
al-Jadwal al-`ishrīnī li-Abī Ja`far Muḥammad ibn Mūsā al-Khwārizmı; A4. of No 41
al-Jadwal al-kabīr; A1.of No 1384
Jadwal al-kawākib al-thābita li- ākhir sanat 940 min al-hijra; A1. of No 903
Jadwal al-kawākib al-thābita li sanat 1111; A1. of No 1269
Jadwal kawākib thābita li sanat 1139; A13. of No 1323
Jadwal li `arḍ 34º shimāl fī ma`rifat al-ghāya wa niṣf al-qaws al-ḥaḍīd; A23. of No 750
Jadwal li istikhrāj faḍl al-dā'ir; A18. of No 888
Jadwal maḥlūl al-mayl; Princeton (Garr. 1026)
Jadwal Maqāmāt al-Kawākib al-Khamsa l'l-Rujū` wa al-Istiqāma; A5. of No 1052
Jadwal fī ma`rifat al-maṭāli` wa ikhtilāfihā fī ru'yat al-ahilla; A3. of No 960
Jadwal ma`rifat al-sana; Tehran (Sipahsalar 916)
Jadwal ma`rifat faḍl al-dā'ir li'l-`aṣr li ru'ūs al-burūj; A9. of No 727
Jadwal maṭāli` al-burūj; (Vienna 341)
Jadwal maṭāli` al-falak al-mustaqīm; (Vienna 342)
Jadwal al-Maṭāli` al-Falakiyya min Awwal al-Jady wa Tusamma Maṭāli' al-Zawāl;. A6. of No 1052
Jadwal mawqi` `aqrab al-sā`a fī awqāt al-`ibādāt; A14. of No 1323
Jadwal-i mawqif-i sitārahā; Tashkent (Institute for Oriental Studies 9254/5)
Jadwal al-Mayl al-awwal wa Bu`d al-Quṭr wa Aṣl al-Muṭlaq, Jadwal Nıṣf al-Ta'dīl Ghāyat al-Irtifā' li 'Arḍ; A6. of No 1384
Jadwal al-mi'a al-rābi'a ba`d al-alf; M1. of No 0240
al-Jadwal al-mufīd; Calcutta (Asiatic Society of Bengal 1502)
Jadwal al-munḥarifa wa'l-basīṭa; A8. of No 1384
Jadwal Muqawwim al-Jawzahar li Ṭūl "nadna" `alā al-Raṣad al-Jadīd li Ulugh Beg; A32. of No 888
Jadwal-i mustakhraj al-Zīj-i jadīd-i Gurgānī; A3. of No 1080
Jadwal al-nisba al-sittīniyya; M2. of No 903; Cairo (Mīqāt 64/7 = Mīqāt 797 = Zaki 740/2)
Jadwal ru'yat al-ahilla fī'l-aqālīm al-sab`a; Cairo (Tal`at mīqāt 119/1)
Jadwal-i sā`āt; Dushanbe (Institute of Oriental Studies 1298)
Jadwal Sā`āt Maṭāli` Baladiya li `Aṣrimā; A3. of No 1387
Jadwal al-samt li-`arḍ Dimashq; A5. of No 829
Jadwal-i sittīn; Tehran (Sipahsalar 895)
Jadwal-i sittīn bā ba`ḍī qawā`id-i nujūmiyya; Bombay (Asiatic Society 19)
al-Jadwal al-sittīnı; Berlin (State 5722)
Jadwal ta`ādil al-qamar; A9. of No 815
Jadwal taqwīm al-shams li ṭūl Makka; A12. of No 1243
Jadwal Taqwīm al-Shams li Ṭūl "Nadna" min Sāḥil al-Baḥr al-Gharbī `alā al-Raṣad al-Jadīd li Ulugh Beg; A7. of No 1052
Jadwal al-tawqī`āt wa mawqī` `aqrab al-sā`a fī'l-shuhur al-qibṭiyya; A14. of No 1367
Jadwal al-tawqiyāt wa'l-ḥawādith `ala shuhūr al-Rūm; Leipzig (814/2)
K. jadwal `uyyina fīhi shuhūr al-qamariyya bi'l-sinīn al-qamariyya min qibal al-nujūm; Istanbul (Topkapı Sarayı 3512)

Jadwal yu`lamu minhu samt al-waqt li-ayy irtifā`; Berlin ((IGMN)H. 54)
Jadwalān li maqāmay al-jawazahir wa'l-kayd; A7. of No 283
Jadwalān li-rasm munharifāt 59 9 wa 61 27 li-`arḍ ghayr madhkūr; A30. of No 888
Jadwalhā-yi nujūm; A1. of No 0160
Jadwalhā-yi nujūmı; Tehran (Majlis 2449/8. 3117/2); Mashhad (Mawlawi 20/5, 538/8)
K. risāla Ja`far al-Sādiq fī `ilm al-ṣinā`a wa'l-ḥajar al-mukarram; Mi1. of No 5
al-Ja`fariyya fī'l-ḥisāb, Ja`fariyya ḥisābiyya Ja`fariyyat-i ḥisāb = al-Ja`fariyya fī'l-masā'il; M1. of No 1025
Jalā' al-adhhān fī zīj al-Battānī; A37. of No 348
al-R. al-Jalāliyya fī ma`rifat al-asṭurlāb al-shimālī; A1. of No 0178
R. fī jam` aḍlā` al-murabba`āt wa'l-muka``abāt wa akhdh tafāḍulihā; M8. of No 256
M. fī jam` al-ajzā'; M49. of No 328
K. fī'l-jam` bayna ra'yay al-ḥakīmayn Aflaṭūn al-ilāhī wā Arisṭuṭālīs; PH7. of No 180
K. fī'l-jam` wa'l-tafrīq; M6. of No 124
Jam` al-ṭuruq al-sā'ira fī ma`rifat awtār al-dā'ira; M19. of No 348
K. al-jam` fī ḥisāb; M1. of No 163
K. al-jam` wa'l-tafrīq; M2 of No 39; M2. of No 41; M3. of No 231
K. al-jamāhir fī ma`rifat al-jawāhir; Mi1. of No 348
Jamāl al-ḥussāb fī kamāl al-ḥisāb; M1. of No 1001
K. -i jāmi` al-ḥikmatayn; PH2. of No 393
al-K. al-jāmi` fī usūl al-ḥisāb; M3. of No 327
al-K. al-jāmi` fī'l-khaṭa'ayn; Berlin (State 6007/1)
al-K. al-jāmi` fī'l-ḥisāb; M1. of No 229
al-K. al-jāmi` fī'l-ḥisāb; M1. of No 230
al-K. al-jāmi` li-ṣifāt ashtāt al-nabāt wa ḍurūb anwā` al-mufradāt; B1. of No 470
al-K. al-jāmi`; M4. of No 225
Jāmi` al-alḥān; Mu4. of No 807
Jāmi` al-anwār min al-kawākib wa'l-abṣār; A2. of No 1108
Jāmi` Bahādur-Khānı; E1. of No 1417
Jāmi` al-daqāiq fī kashf al-ḥaqāiq; E2. of No 616
Jāmi` al-farāiḍ; M2. of No 751
Jāmi` al-fawāid; M1. of No 061
Jāmi` fī'l-ḥisāb; M2. of No 59
Jāmi` al-funūn wa-qāmi` al-ẓunūn; E1. of No 495
Jām-i Gītī-yi-numā; A1. of No 839
Jāmi` (Jawāmi`) al-ḥisāb bi'l-takht wa'l-turāb; M17. of No 606
al-Jāmi` al-kabīr; A3. of No 99
Jāmi` al-mabādī wa'l-ghāyāt fī `ilm al-miqā;t A1.of No 592
al-Jāmi` al-mufīd fī bayān uṣūl al-taqwīm wa'l-mawālīd; A18. of No 815
Jāmi` al-muhimmāt fī `ilm al-mīqāt; A2. of No 1027
Jāmi` qawānīn `ilm al-hay`a; M5. of No 341
Jāmi` qawānīn `ilm al-hay'a; Istanbul (Topkapı Sarayı 3342/1)
Jāmi`-i Shāhī fī'l-nujūm; A7. of No 296
al-Jāmi` al-Sha`mī al-madkhal fī `ilm aḥkām al-nujūm; St. Petersburg (Institute of Oriental Studies B 1791)
Jāmi` al-tawārīkh; H1. of No 656
Jāmi` al-`ulūm = Jawāmi` al-`ulūm = K. al-sittīn; E1. of No 535
Jāmi` al-uṣūl fī'l-jabr wa'l-muqābala; M2. of No 0142
Jarr al-athqāl; Tehran (Malik 5750.); Tehran (Sipahsalar 715/1, 899-901. = Tehran Malik 5750); Tehran (University Adab. 197/1)
Jarīdat al-ruqūm al-falakiyya fī ḥisāb al-rusūm al-baladiyya; A10. of No 1384
R. fī'l-jawāb `alā masā'il `adadiyya `alā'l-ṭarīq al-kullī; M40. of No 296
R. fī'l-jawāb `an mas'ala `adadiyya wa hiya kayfa najidu [murabba`ayn] yakūnu majmū`uhumā huwa murabba`an; M49. of No 296
R. fī jawāb `an al-masā'il allatī su'ila `anhā fī ba`ḍ al-ashkāl al-ma'khūdha min K. al-ma`khūdhāt li-Arshimīdis; M20. of No 296
R. fī jawāb masā'il al-handasa; M3. of No 299
R. fī jawāb mas'ala `an kitāb Yūḥannā ibn Yūsuf fī inqisām khaṭṭ mustaqīm bi-niṣfayn wa tabyīn khaṭa' Yūḥannā fī dhālika; M25. of No 296
Jawāb `ammā sa'alahū al-faqīh Abū `Alī al-Ḥasan ibn al-Ḥārith fī misāḥat al-muthallathāt min ghayr istikhrāj al-`amūd wa masqaṭ al-ḥajar; M5. of No 256
R. dar jawāb-i suwāl; M4. of No 1178
Jawāb `alā Su'āl min Saghr dimyāt fī Qawl Ibn al-Shāṭir fī Bāb al-Sihām; A4. of No 1040
Jawāb `an burhān mas'ala muḍāfa ilā'l-maqāla al-sābi`a min kitāb Uqlīdis fī'l-uṣūl wa-sā'ir mā jarrahu al-kalām fīhi; M2. of No 458
Jawāb `an faṣl min kitāb Abī'l-Ḥabash al-Naḥwī fī mā ẓannahu anna al-`adad ghayr mutanāhī; PH8. of No 198
Jawāb `an kitāb Abī Isḥāq al-Ṣābi' `an al-ashkāl al-handasiyya wa marākiz al-thiqal wa ghayrihi; M22. of No 277
Jawāb `an masā'il handasiyya su'ila `anhā bi-muhandisī Khurāsān; M31. of No 296
Jawāb `an su'āl sā'il `an al-majarra hal hiya fī'l-hawā' aw fī jism al-samā = M. fī'l-radd `ala man khālafahu fī ma`ānihī ḥawla al-majarra; A7. of No 328

Jawāb `an su'āl li-Abī Bakr Muḥammad ibn Ya`qūb al-Shamsī `an al-muthallath iḥdā al-zawāyā qā'ima wa ukhra ma`lūma; M9. of No 342
Jawāb al-sheikh al-fāḍil Abī'l-Jūd Muḥammad ibn al-Layth `ammā sa'alahū al-akh al-fāḍil Abū'l-Rayḥān Muḥammad ibn Aḥmad al-Bīrūnī; M3. of No 342
Jawāb shakk fī ikhtilāf manẓar al-qamar min shukūk Abī'l-Qāsim ibn Ma`dān; Istanbul (Topkapı Sarayı Hazine 455 = Oxford I 913, 940); Oxford (Bodleian I 913, 940. = Istanbul TK Haz. 455)
Jawāb `an thalāth masā'il: ḍarūrat al-taḍādd fi'l-`ālam wa'l-jabr wa'l-baqā'; PH1. of No 420
Jawābāt lahū `an `iddat masāil sa'ala `anhā Sanad ibn `Alī; A26. of No 103
al-Jawābāt `an al-masā'il al-`ashara al-kashmīriyya; A35. of No 348
al-Jawābāt `an al-masā'il al-wārida min munajjimī al-Hind; A34. of No 348
al-Jawāhir al-ḥisān wa shams `ayn al-zamān fī `ilm al-qabbān; Me1. of No 1214
al-Jawāhir al-khamsa fī `ilm al-ḥisāb; A1. of No 1393
al-Jawāhir al-lāmi`a wa'l-natīja al-jāmi`a; A26. of No 1243
al-Jawāhir al-maknūna fī ṣadaf al-farā'iḍ al-mansūba; M1. of No 1313
al-Jawāhir al-nayyirāt fī rasm al-basā'iṭ wa'l-munḥarifāt; A2. of No 945
al-Jawāhir al-Nayyirat fī al-`Amal bi Rub` al-Muqanṭarāt; A9. of No 813; A34. of No 888
Jawāhir al-niẓām fī ma`rifat al-in`ām; Mu1. of No 892
Jawāhir al-Silk; A2, A4. of No 955
Jawāhir al-`ulūm Humāyūnı; E1. of No 1019
Jawāmi` aḥkām al-kusūfāt wa qirānāt al-kawākib; A1. of No 157
Jawami` aḥkam al-nujūm; A1. of No 471
Jawāmi` al-ḥisāb; M1. of No 991
Jawāmi` K. al-ḥayawān li-Arisṭā ṭālīs wa ba`duhu sab` maqālāt fi'l-nafs lahū ayḍan istakhrajahā Thābit ibn Qurra li-Mūsā al-munajjim; Z1. of No 103
Jawāmi` al-`ilm; M1. of No 0215
K. jawāmi` al-jāmi`; M5. of No 225
Jawāmi` li kitāb Arisṭuṭālis fi'l-āthār al-`ulwiyya; M11. of No 77
Jawāmi` limā qāla Baṭlamyūs fī qismat al-arḍ al-maskūna `alā'l-burūj wa'l-kawākib; A12. of No 103
Jawāmi` ma`ānī kitāb Abī Ḥāmid al-Ṣaghānī fi'l-tasṭīḥ al-tāmm; M8. of No 348
K. al-jawāhir fī ma`rifat al-samt wa faḍl al-dā'ir; A7. of No 888
Jawāmi` al-mawjūd li-khawāṭir al-Hunud fī ḥisāb al-tanjīm; A31. of No 348
R. fī jawāmi` ta`rīfāt `ilm al-hay'a; A13. of No 308; Princeton (Yehuda 373a.)
Jawāmi` al-`ulūm; E1. of No263
al-Jawhar al-maknūn fi'l-hisāb al-maṣūn; A1. of No 849
al-Jawhara al-Muḍ`iyya fi'l-A`mal bi'l-Nisba al-Sittiniya; A3. of No 945
al-Jawhara al-muḍī'a; A1. of No 855
al-Jawharāt al-Bahiyya fī Ma`rifat al-Awqāt al-Layliyya wa'l-Nahāriyya; A2. of No 1163
Jawharat al-Nafs fī Ma`rifat al-Tārīkh al-Musta`mal wa Ḥall Darajat al-Shams; A2. of No 1216
(R.) (fi'l-) jayb; A2. of No 750; A1. of No 983; A11. of No 873; A3. of No 1407; A1. of No 1111; A6. of No 808
R. al-jayb, R. rub`-i mujayyab; A5. of No 990
R.-yi jayb āfāqı; A14. of No 990
K. al-jayb li daqīqa fa daqīqa wa thāniya fa thāniya; A4. of No 283
R. al-jayb al-ghayb; A1. of No 077
R. al-jayb al-jāmi`a = R. al-jayb al-jāmi`; A4. of No 940
R.-i Jayb-i Rub` al-Dā'ira; A34. of No 990
Jayb-i tartīb-i dā'ira ; M3. of No 985
Jayb wa ẓill; M1. of No 1321
Jazīrat al-arqām; M1. of No 1139
R. fi'l-jidhr al-aṣamm; M1. of No 1100
M. fi'l-jidhrī ikhtiṣār kitāb al-Majisṭī; A1. of No 285
K. -i Jihān-i dānish; A1. of No 666
Jihān-dānish; A2. of No 459
Jihān-nāma; G1. of No 551
Jihān-numā; G1. of No 1145
R. fī jihat al-Qibla; A1. of No 889
K. fī anna al-jism yataḥarraku min dhātihī wa anna'l-ḥaraka lahā mabda' ṭabī`ī; Me1. of No 142
Fi'l-jughrāfiyya; G1. of No 226
K. fī jumal min dalālāt al-ashkhās al-`aliyya; A1.of No 54
Jumal al-falsafa; E1. of No 463
al-Jumāṭriyā fi'l-handasa wa māhiyātihā; M2. of No 226
K. jumi`at fīhi al-uṣūl al-handasiyya wa'l-`adadiyya min kitābay Uqlīdis wa Abulūnyūs; M2. of No 327
K. fī jumlat al-adilla `alā'l-mawālīd min aḥkām al-nujūm; A1. of No 37
(R.) (M.) fi'l-juz` alladhī lā yatajazza'; M34. of No 328; Ph3. of No 327; Ph1. of No 634; Ph1. of No 935
R. juz' lā yatajazza'; Ph1. of No 1241
R. fī anna al-juz` yatajazza' ilā mā lā nihāya lahu; Ph1. of No 100
al-R. al-juz'iyya fī ta`dīl al-daraja al-shamsiyya; A1. of No 1131

-K-

K. al-ka`b wa'l-māl wa'l-a`dād al-mutanāsiba; M1. of No 231
al-K. al-kabīr fi'l-handasa taqaṣṣā fihi ajzā'an min al-khaṭṭ al-mustaqīm wa'l-muqawwas wa'l-munḥanī; M4. of No 310
al-kitāb al-kāfi; M8. of No 124
al-K. al-kāfi fi bayān al-ṣaff al-ṭawīl = R. fi bayān istiqbāl al-Qibla; A1. of No 863
al-Kāfi fi'l-farāiḍ; M2. of No 411
al-Kāfi fi ḥisāb al-dirham wa'l-dīnār; M10. of No 487
al-Kāfi fi'l-ḥisāb; M1.of No 0184
al-Kāfi fi'l-ḥisāb al-hawā'ī; M1.of No 310
al-Kāfi fi `ilm al-ḥisāb; M1. of No 309
K. al-kāfi fi'l-ṭibb; ME6. of No 142
al-Kāfiya fi nujūm; A1. of No 582
R. kāfiyya fi'l-`amal bi'l-jayb; A1. of No 744
al-R. al-kāfiyya fi'l-ḥisāb; M6. of No 589
R. kāfiya fi `ilm al-ḥisāb; Beirut (University of St .Joseph 238)
Kāinat; Dushanbe (Ferdowsi 1722)
R.-yi kā'ināt-i jaww; Ph1. of No 1339; Baku (Institute of Manuscripts A 496/4)
Kalām fi a`ḍā `al-ḥayawān; Z1. of No 180
Kalām fi ayyat al-kursī; A7. of No 635
Kalām `alā dhawāt al-asmā wa mā yattaṣilu bihā min al-sharḥ wa'l-bayān bi'l-ṣūra wa'l-mathal; Rabat (General 2431)
Kalām `alā ḥarakāt al-shams; Fas (Zawiya 2c)
Kalām kāf fi ma`rifat al-ijtimā` wa'l-istiqbāl wa'l-kusūf wa'l-khusūf; A21. of No 1243
M. fi'l-kalām `alā'l-kawākib dhawāt al-adhnāb wa'l-dhawā'ib; A39. of No 348
Kalām fi'l-khalā'; Ph2 of No 180
al-Kalām al-ma`rūf fi a`māl al-khusūf; A2. of No 1323; Berlin (State 5726)
Kalām `ala muqaddima fi ḍil` al-musabba`; M14. of No 328
Kalām `an muqanṭarāt khaṭṭ al-istiwā'; A30. of No 842
Kalām fi'l-nayyirayn; Fas (Zawiya 10g)
Kalām fi'l-nisba al-sudsiyya; Cairo (Fadil riyad. 39/2)
Kalām fi tawṭi'at muqaddimāt li `amal al-quṭū` `alā saṭḥ mā bi-ṭarīq ṣinā`i; Florence (Lorenzo Medici 282/11 (new 152/11))
Kalām fi'l-Thurayyā; Fas (Zawiya 2d)
R. `alā al-kalām `alā mā yuṭlab li-`ilm al-ḥisāb; Berlin (State 5965)
Kalīd-i `aql dar hay'a; Hyderabad (Central State Riyad. 204)
R.-yi Kamāliyya; A16. of No 802
al-R. al-Kamāliyya fi'l-ḥaqāiq al-ilāhiyya; E4. of No 535
al-Kāmil; M2. of No 532
(al-K.) al-kāmil fi asrār al-nujūm; A1. of No 260; Paris (2591)
al-Kāmil fi'l-ḥisāb al-hawā'ī; M2. of No 310
al-Kāmil fi'l-Ḥisāb; M1. of No 642
al-Kāmil fi sharḥ al-Zīj al-shāmil; A1. of No 859
al-Kāmil fi ṣan`at al-asṭurlab al-shimālī wa'l-janūbī bi'l-handasa wa'l-ḥisāb; A2. of No 67
Kāmil al-ṣinā`a al-nujumiyya; A1. of No 0267
Kāmil al-ta`ābīr; My2. of No 567
al-R. al-kāmila fi `amal al-asṭurlāb = K. fi `ilm al-asṭurlāb; A2. of No 609
al-R. al-kāmila fi `ilm al-jabr wa'l-muqābala; M5. of No 599
al-R. al-kāmila fi ru`yat al-hilal; A14. of No 46
R. fi'l-kammiyya al-muḍāfa; M20. of No 79
Fi anna kammiyyat al-burūda wa'l-ḥarāra laysat bi-jawhar; Ph6. of No 317
R. fi kammiyyat kutub Arisṭūṭālis wa mā yuḥtāju ilayhī fi taḥṣīl al-falsafa; PH1. of No 79
K. fimā kāna Baṭlamyūs al-Qalawdhī ista`malahū `alā sabīl al-tasāhul fi istikhrāj ikhtilāfāt Zuḥal wa'l-Mirrīkh wa'l-Mushtarī; A5. of No 174
Kanz al-a`dād; St. Petersburg (University 1143)
Kanz al-asrār fi Rawḍat al-azhā;r A1. of No 0205
Kanz al-burhān fi'l-jabr wa'l-jabr wa'l-muqābala; M1. of No 1265
Kanz al-durar fi aḥwāl manāzil al-qamar; A1. of No 1341
Kanz al-fawā'id fi dhikr al-qawā`id; A1. of No 1189
Kanz al-Futūḥ fi Rasm al-Sā`āt `alā al-Suṭūḥ; A5. of No 1341
Kanz al-tullāb fi `amal al-asṭurlāb; A2. of No 695
Kanz al-`ulūm wa'l-durr al-manẓūm fi ḥaqāiq `ilm al-sharī`a wa daqāiq `ilm al-ṭabī`a; E1. of No 500
Kanz al-`ummāl fi thubūt sunan al-aqwāl wa'l-af`āl; PH1. of No 896
K. kanz al-tujjār fi ma`rifat al-aḥjār; Mi1. of No 649
K. Kanz al-yawāqīt fi istī`āb al-mawāqīt; Leiden (University 468)
Karāma durra; Tehran (University 931)
Karnāma-yi Ṣāḥib-qirān-i thānī - zīj-i Shāh Jihānī; A1. of No 1092
R. fi kashf a`awār al-bāṭiniyya bi-mā huwa `ala `āmmatihim fi ru'yat al-ahilla; A14. of No 299
Kashf al-asrār; (Vienna 351)
Kashf al-asrār `an `ilm ḥurūf al-ghubār; M3. of No 865
Kashf al-asrār fi `ilm al-nujūm wa'l-ṭilismāt; A2. of No 1262
Kashf al-astār `an Nuzhat al-ghubār; M1. of No 1355

K. fī kashf `awār al-munajjimīn wa ghalaṭihim fī akthar al-a`māl wa'l-aḥkām; A1. of No 487
Kashf daqā'iq al-falak fī taḥrīr thawābit man salak; A1 of No1294
Kashf al-ghawāmiḍ fī `ilm al-farā'iḍ; M14. of No 873
Kashf al-ghayāhib `an mushkilāt al-kawākib; A8. of No 1323
Kashf al-ghumma fī mīrāth ahl al-dhimma; M1. of No 726
Kashf al-ḥaqā'iq fī ḥisāb al-daraj wa'l-daqā'iq; M1. of No 815
Kashf al-ḥaqā'iq Zīj-i īlkhānī; A1. of No 686
Kashf al-ḥijāb; M1.of No 024
Kashf al-ḥijab `an wajh Bughyat al-ṭullāb; M2. of No 1261
Kashf al-hijāb fī `ilm al-asṭurlāb; A1. of No 1150
Kashf al-ḥijāb fī sharḥ al-lubāb fī uṣūl al-hisāb; M1.of No 850
Kashf al-jilbāb `an `ilm al-ḥisāb; M2. of No 865
Kashf al-karubāt fī taḥqīq masā'il yakhtāuj ilayhā ṭālib `ilm al-awqāt (al-mīqāt); A9. of No 1017
Kashf al-ma`ānī; A6. of No 1010
K. al-kashf `an manāhij al-adilla fī `aqāid al-milla bi-ḥasb al-ta'wīl min al-shubah al-muzayyafa wa'l-bida` al-muḍilla; PH7. of No 512
Kashf al-mughayyab fi'l-`amal bi'l-rub` al-mujayyab; A2. of No 742
Kashf al-mughayyab fi'l-ḥisāb bi'l-rub` al-mujayyab; A13. of No 750
Kashf al-qinā' `an asrār al-qaṭṭā `; M13. of No 606
Kashf al-qinā` `an al-Taḥrīr Thawdhūsyūs; Hyderabad (Sa`idiyya Riyad. 28)
Kashf al-qinā` an asrār al-shakl al-qaṭṭā` = al-R. al-qaṭṭā ` fī `ilm al-handasa = R. fi'l-shakl al-qaṭṭā ` al-saṭḥī wa'l-kurī = K. ḍābṭ da`āwī al-shakl al-qaṭṭā ` wa barāhīnihī; M14. of No 606
Kashf al-qinā` fī rasm (waḍ`) al-arbā`; A1. of No 813
Kashf al-qinā` fī rasm al-arbā`; A1. of No 0172
Kashf al-qinā` fi'l-quṭb; A3. of No 1042
Kashf al-rayb `an al-jayb; A7. of No 896
Kashf al-rayb `an ḥāl al-mutajassisīn `alā'l-ghayb; M1. of No 1248
Kashf al-rayb fi'l-`amal bi'l-jayb; A3. of No 715
Kashf al-rayb wa bayān al-sirr al-maghmūd fi'l-`amal bi dā'irat rijāl al-ghayb wa bi'l-basīṭa dhāt al-`urūḍ; A1. of No 1129
Kashf al-riwāq `an ṣarf al-jāmi`a ilā'l-awāq; M1. of No 1146
Kashf al-salsala `an waṣf al-zalzala; G1. of No 896
M. fī kashf al-shubha allatī `araḍat li-jamā`a miman yansubu nafsahu ilā `ulūm al-ta`ālīm `alā Uqlīdis fi'l-shakl al-rābi` `ashar min al-maqāla al-thāniya `ashara min K. al-uṣūl; M5. of No 458
K. kashf tamwīh Abi'l-Jūd fī mā qaddamahū min al-muqaddimatayn li-`amal al-musabba`; M1. of No 344
Kashf al-ẓunūn fī asāmī al-kutub wa'l-funūn; HS1. of No 1145
Kashīfa al-muḥīṭ wa'l-muḥā ṭ li inḍibāṭ aḥwālihi min sumuw wa istiwā wa inḥiṭāṭ; M1. of No 050
al-Kashkūl; E1. of No 1058
R. fi'l-kasr; Tashkent (Institute for Oriental Studies 8507/11)
R. katabahā al-Sheikh al-Raīs Abū `Alī ibn Sīnā ilā Kiyā Abī Ja`far; Ph9. of No 317
R.-yi kawākib; Tashkent (Institute for Oriental Studies 8312/3)
(R.) (K.) al-kawākib al-thābita; A4. of No 233; A2. of No 1086
al-Kawākib al-bahiyya fī qismat al-mirāth; M1. of No 1234
al-Kawkab al-durrī fī ma`rifat al-asṭurlāb al-kurī; Fas (Zawiya 5j)
al-Kawākib al-durriyya fi'l-binkāmāt al-dawriyya; Me2. of No 1004
al-Kawākib al-Durriyya fī Waḍ` al-Bankāmāt al-Dawriyya; A16. of No 1004
Fī anna al-kawākib `alā ghāyat al-istidāra laysa fīhā nutū` wa aghwār; A4. of No 142
al-Kawākib al-muḍī`a fi'l-`amal bi'l-masā'il al-dawriyya; A24. of No 815
al-Kawākib al-thawābit; A1. of No 0190
al-Kawākib al-zāhira fi'l-`amal bi jayb rub` al-dā'ira; A2. of No 932
al-Kawākib al-ẓāhira; Berlin (State 5847)
al-Kawākib al-ẓāhira fī waḍ khayṭ al-musātara; A2. of No 1126
R. al-kawn wa'l-fasād; PH2. of No 1044
R. al-kawn wa'l-taklīf; PH1. of No 420
al-Kawr `alā'l-dawr, al-Amad `alā'l-abad = Zīj al-muqtabis; A1. of No 530
Kayf yu`lamu mā maḍā min al-nahār min sā`āt min qibal al-irtifā` al-mafrūḍ; A1. of No 123
K. fī kayfiyyat al-aẓlāl; Ph10. of No 328
K. fī kayfiyyat al-ibṣār buyyina fīhi anna al-ibṣār laysa yakūnu bi shu`ā ` yakhruju min al-`ayn wa yunqaḍu fīhi ashkāl min kitāb Uqlīdis fi'l-manāẓir; Ph3. of No 142
Kayfiyyat rusūm al-Hind fī ta`allum al-ḥisāb; M13. of No 348
Fī kayfiyyat ṣan`a jamī al-asṭurlāb; A9. of No 296
Kayfiyyat tarkīb al-aflāk; A1. of No 318
K. fī kayfiyyat tasṭīḥ al-basīṭ al-kurī; M1. of No 458
K. kayfiyyat al-aflāk; A2. of No 318
R. fī Kayfiyyat `Amal al-Basīṭa; A3. of No 1126
R. fī kayfiyyat `amal al-basīṭa wa mā tashtamilu `alayhi min qisiy al-`aṣr wa'l-basīṭa; A2. of No 1129

R. fī kayfiyyat `amal dāira musāwiyya li-saṭḥ usṭuwāna mafrūḍa; M29. of No 79
R. fī kayfiyyat al-`amal fī istikhrāj al-majhūl; M1. of No 1253
R. fī kayfiyyat `amal al-sā`āt; Hyderabad (Sa`idiyya Hay'a 28)
R. fī kayfiyyat al-arṣād; A22. of No 328; Paris (2244/6)
R. fī kayfiyyat al-arṣād wa mā yuḥtāju ilā `ilmihī wa `amalihī min al-ṭuruq al-mu'addiya ilā ma`rifat `awdāt al-kawākib; A1.of No 629
R. fī kayfiyyat al-ḥukm `alā taḥāwīl sinī al-`ālam = K. fī kifāya `alā taḥāwil sinī al-`ālam; A9. of No 635
R. fī kayfiyyat istikhrāj al-juyūb al-wāqi`a fī'l-dā'ira; M8. of No 635
R. fī kayfiyyat-i isti`lām istifā'-i asṭurlāb; A15. of No 606
R. fī kayfiyyat rasm al-dastūr wa waḍ` mā yakhtāju ilayhi li-muqawwam al-qamar sanatan kāmilatan; A23. of No 815
R. fī kayfiyyat ṣan`at al-ālāt al-nujūmiyya; A8. of No 296
R. fī kayfiyyat takhṭīṭ al-rub` al-muqanṭar; Istanbul (Süleymaniye AS 2761/4)
R. fī kayfiyyat taṣawwur al-khaṭṭayn alladhayn yaqrubān wa lā yaltaqiyān = R. fī ma`rifat al-khaṭṭayn al-mustaqīm wa'l-munḥanī; M27. of No 296
Kayhān-shinākht; A1. of No 424
Kethābhā de-`al tbibūth genseh we-abhāhāoi de-men manū methyabhlīn; H3. of No 103
Kethābhā de-al hay datrein sūrṭe trīse kadh mettafkīn `al bṣīr men tartein gūnāwāthā ṭrīṣāthā pag'īn baḥdāde; M28. of No 103
Kēthābā dẹ-Bhābhāthā; PH6. of No 633
Kẹthābā dẹ-ghrammatikī; L2. of No 633
Kēthābā dē-huddāyē; PH5. of No 633
Kethābhā de-maktabh zabhne de-henūn Kaldeye; H2. of No 103
Kethābhā de-musiqi; Mu2. of No 103
Kẹthābhā dẹ-thunnāyẹ meghaḥḥekhāne; L3. of No 633
Kethāba de-pūlāg yawmāthā de-shābū`a `al kawkb shab`ā; A30. of No 103
Kẹthābā dẹ-ṣemhe; L1. of No 633
Kēthābā dē-yawnā; PH4. of No 633
Kēthābā dē-zīg dē-sharwāyē; A3. of No 633
Kēthābā d'īthiqon; PH3. of No 633
Kẹthābha Marghānītha; PH1. of No 673
Kethābhā meṭūl nāmūse we qānūne de'ḥanfe; H4. of No 103
Kethābhā meṭūl shūrār tawdīthā de-ḥanfe; H1. of No 103
al-R. al-khāmisa min Khulāṣat al-`ulūm al-riyāḍiyya wa huwa `ilm al-hay'a; Istanbul (Süleymaniye AS 2614)
al-M. al-khāmisa li'l-Qānūn al-Mas`ūdī; G1. of No 348
M. khamsa fī'l-shakl al-ma`rūf bi'l-qaṭṭā `; Tehran (Mu`tamid 120/18)
Kharīdat al-`ajā'ib; A5. of No 668
Kharīdat al-durar wa jarīdat al-fikar; A2. of No 1004
(K.) (R.) (fī'l-)khaṭā'ayn; M7. of No 309; M7. of No 124; M6. of No 225
R. fī'l-khaṭṭayn alladhayn yaqrubān wa lā yaltaqiyān; M3. of No 541
M. fī anna al-khaṭṭayn idhā ukhrijā ilā zāwiyatayn aqall min qā'imatayn iltaqayā; M16. No 103
Khawāṣṣ al-a`mida fī'l-muthallath; M30. of No 296
Khawāṣṣ-i `adad = R.-yi arithmāṭiqī; M3. of No 1178
M. fī khawaṣṣ al-dawā'ir; M33. of No 328
Fī khawāṣṣ al-maqṭū`āt al-thalātha; M1. of No 302
Fī khawāṣṣ murabba` quṭr al-dā'ira; M15. of No 296
R. fī khawāṣṣ al-muthallath min jihat al-`amūd; M16. of No 328
M. fī khawāṣṣ al-qaṭ` al-mukāfī'; M39. of No 328
M. fī khawaṣṣ al-qaṭ` al-zā'id; M40. of No 328
R. fī khawāṣṣ al-qubba al-zā'ida wa'l-mukāfi'a; M24. of No 296
K. fī khawāṣṣ al-shakl al-bayḍī wa'l-`adasī; M46. of No 296
Dar khawāṣṣ-i wafq u muthallath u `ilm al-`adad; Tashkent (Institute for Oriental Studies 446/5)
Khayāl al-kusūfayn `inda'l-Hind; A33. of No 348
Khazīna al-a`dād; M3. of No 1174 .
Khilāṣ Kayfiyyat Tarkīb al-aflāk; A3. of No 318
R. khilṭ al-jidhr al-aṣamm; Istanbul (Süleymaniye, Laleli 2730)
K. al-khiṭāba; L1. of No 180
Khiṭāy-nāma; G1. of No 845
R. fī khubr ta`līf al-alḥān; Mu2. of No 79
Khulāṣa al-Majisṭī; A2. of No 635
Khulāṣa al-marsūm fī `ilm al-nujūm; A1. of No 095
Khulāṣa al-siyāq; Hyderabad (Central State Riyad. 311)
Khulāṣā al-sulūk fī al-rif`a wa'l-sumūk; M1. of No 090
Khulāṣat al-aqwāl fī ma`rifat al-waqt wa ru'yat al-hilāl; A14. of No 815
Khulāṣat al-durar fī'l-`amal bi'l-qamar; A12. of No 842
Khulāṣat al-hay`a; A1. of No 977
Khulāṣat al-hay'a `Alī al-Qushjī; A1. of No 1102
Khulāṣat al-ḥisāb; M1. of No 1154; M1. of No 804; M18. of No 873; M4. of No 845
Khulāṣat al-minhāj fī `ilm al-ḥisāb; M1. of No 891
Khulāṣat al-qawā`id wa ghāyat al-maqāṣid; A1. of No 678

Khulāṣat al-siyāq; Cambridge (University Browne 439. = Hyderabad riyad. 311)
Khulāṣat al-tanjīm wa burhān al-taqwīm; A3. of No 875
Khulāṣat al-zīj; A2. of No 471
Khulāṣat Kifāya al-ṭullāb; M2. of No 963
Khulāṣa-yi Hāshimī; M1. of No 068
Khulāṣa-yi Manṣūrī; M1. of No 0109
Khulāṣa-yi rāz; M2. of No 1174
Khulāṣa-yi taqwīm; Calcutta (Asiatic Society of Bengal 491)
Khulāṣat al-hisāb; M1. of No 1058
K. fī khuṭūṭ al-taḥdīd; M2. of No 302
K. khullāṣa fīhi `ilm al-manāẓir min kitābay Uqlīdis wa Baṭlamyūs; Ph2. of No 327
R. dar khusūf u kusūf; A5. of No 1010; Tehran (Majlis 4829/7); Tehran (University 723/3); Mashhad (Mawlawi 552/1)
R. fī khusūf al-qamar wa kusūf al-shams wa'l-ra`d wa'l-zalzala wa dā'irat al-qamar wa'l-nayrūz; A1. of No 1246
R. fī khuṭūṭ al-sā`āt; A9. of No 328
R. fi'l-khuṭūṭ wa'l-ḍarb bi-`adad al-sha`īr; M19. of No 79
Khwān al-ikhwān; PH2. of No 393
K. kimiyā al-iṭr wa'l-taṣ`īdāt; Ch1. of No 79
al-Kifāya; M1. of No 034
Kifāya burūj ithnay `ashara; Bombay (Asiatic Society 8/1)
Kifāya fi'l-hay'a; A2. of No 666
Kifāya fi'l-ḥisāb; M1. of No 963
Kifāya al-labīb fi'l-tawāqīt bi'l-nisba wa'l-juyūb; A1. of No 025
Kifāya al-muḥtāj min al-ṭullāb ilā ma`rifat masāil al-falakiyya bi'l-ḥisāb; London (India Office 772/1)
Kifāya al-qanū` fi'l-`amal bi'l-rub` al-maqṭū`; Paris (2542/1)
Kifāya al-qanū` fi'l-`amal bi'l-rub` al-maqṭū`; A15. of No 873
Kifāyat al-`amal bi'l-rub` al-mujayyab al-āfāqī li-ma`rifat awqāt al-ṣalawāt; Paris (5972/4)
Kifāyat al-aḥbāb fī ma`rifat al-awqāt bi'l-ḥisāb; A1. of No 1245
Kifāyat al-ḥuffāẓ; M25. of No 783
Kifāyat al-ḥussāb fī `ilm al-ḥisāb; M3. of No 599
Kifāyat al-jabr; M1. of No 1326
Kifāyat al-Kanū' fī al-`Amal bi al-Rub' al-Makṭū`;A18. of No 990
Kifāyat al-kanū`; A6. of No 595
Kifāyat al-mubtadī= Manẓūma fi'l-rub` al-maqṭū`; A1. of No 1217
Kifāyat al-muḥtāj min al-ṭullāb ilā ma`rifa al-masā'il al-falakiyya bi'l-ḥisāb; A4. of No 856
Kifāyat al-muhtadī wa ijābat al-mahdī; M3. of No 411
Kifāyat al-mushtāq li-ma`rifat faḍl al-dā'ir fī sā'ir al-āfāq; A1.of No 927
Kifāyat al-qanū` fi'l-`amal bi'l-rub`; Bombay (Asiatic Society 67)
Kifāyat al-ta`ālīm; Istanbul (Süleymaniye, Ismi khan 297/1)
K. kifāyat al-ṭabīb; ME1. of No 369
Kifāyat al-ṭālib fī `ilm al-waqt wa bughyat al-rāghib fī ma`rifat al-dā'ir wa faḍlihī wa'l-samt; A5. of No 1323
Kifāyat al-ta`līm fī ṣinā`at al-tanjīm = Nihāyat al-ta`līm fī ṣinā`at al-tanjīm; A1. of No 459
Kifāyat al-ṭullāb fī `ilm al-asṭurlāb; A2. of No 866
Kifāyat al-waqt li ma`rifa al-dā'ir wa faḍlihī wa'l-samt; A4. of No 990; A10. of No 842
R. fī anna kitāb Uqlīdis fi'l-Uṣūl mabnī `alā'l-ta'līf al-manṭiqī fī muqaddimātihi; M1. of No 016
Kīmiyā al-sa`āda; PH5. of No 415
al-Kisr fī `ilm al-ḥisāb; M1. of No 079
al-R. al-kubrā fi'l-rub` al-maskūn; G4. of No 79
al-R. al-kubrā fi'l-ta'līf; Mu4. of No 79
al-R. al-kubrā; PH1. of No 788
R. fī Anna Kulla mā Yusta`malu bi'l-Shaklayn al-Mughnī wa al-Zillī Yumkinu an Yusta`mal bi al-Mistara wa al-birkār; A10. of No 845
K. al-kullīyāt fi'l-ṭibb; ME1. of No 512
R. fī kulliyāt al-wujūd = Darkhwāst-nāma = R.-yi silsila al-tartīb; PH1. of No 420
R. (fī)al-kura; A1. of No 0281; A1. of No 094; A5. of No 915; A12. of No 1390; A3. of No 914
M. fī anna al-kura awsa` al-ashkāl al-mujassama allatī iḥā ṭatuhā mutasāwiyya wa-anna al-dā'ira awsa` al-ashkal al-musaṭṭaḥa allatī iḥā ṭatuhā mutasāwiyya; M7. of No 328
R. fī anna al-kura a`ẓam al-ashkāl al-jirmiyya wa'l-dāira a`ẓam min jamī` al-ashkāl al-basīṭa; M36. of No 79
R. `alā al-kura(t) dhāt al-kursī; Istanbul (Süleymaniye AS 2631.); Paris (2544/3); Princeton (Yehuda 1066, 3168)
K. al-kura al-falakiyya fi'l-nujūm; Istanbul (Süleymaniye AS 2633)
R. fi'l-kura al-falakiyya = K. fi'l-`amal bi'l-kura al-falakiyya = R. fi'l-`amal bi'l-kura al-nujūmiyya = R. fi'l-`amal bi'l-kura dhāt al-kursī; A1. of No 118
K. fi'l-kura wa mā ittaṣala `ilmuhū bi `ilmihā min al-mujassamāt wa awā'il qarība min al-basīṭāt; M10. of No 79
R. fi'l-kura al-mutadaḥrija; M1. of No 935
R. fi'l-kura al-musammāt dhāt al-kursī; Berlin (State 5869. = Cairo (Falak 3844/8 = Fadil mīqāt 101/1 = Taymur riyad. 10/11)

M. fi'l-kura al-mutaharrika `alā'l-sath; M44. of No 328
R. fi'l-kuriyyāt; M34. of No 79
Küçük İlm-i Heyet; A2 of No 1350
Kulliyāt al-ḥisāb; M1. of No 647
Kulliyyāt fi'l-farā'iḍ; M19. of No 865
Kunh al-murād fī `ilm al-wafq wa'l-a`dād; M2. of No 825
Kunh al-murād fī wafq al-a`dād; M2. of No 0283
al-Kunnāsh al-ṭibbī al-nujumı; A1. of No 234
K. fi'l-kura; A1. of No 70; A17. of No 103
Kura wa asturlāb; A36 of No 990
Fī'l-kura dhāt al-kursı; Paris (2542/4)
Fil-kura al-mutaḥarriqa; Ph5. of No 328
Küre Risalesi; A2. of No 1407
K. fī kuriyyat al-samā; A3. of No 299
Kushūfāt al-adilla fī ma`rifat al-khusūfāt wa'l-ahilla; A1. of No 1353
K. al-kusūf; A3. of No 97
R.-yi kusūr; M3. of No 845
R.-yi kusūr-i dīnārı; M1. of No 0166
Kusūrāt ḥisābı = Ḥisāb al-kusūr. R. fi'l-jabr wa'l-muqābala; M3. of No 1390
Kutub fī tashīl al-Majisṭī; A16. of No 103

-L-

R. laṭīfa fī'l-`amal bi'l-kura; Cairo (Taymur riyad. 305. Cairo Mīqāt 173/4 = Bratislava 305)
R. laṭīfa fī'l-`amal bi'l-āla al-musammāt bi'l-shakāziyya; Cairo (Mīqāt 88)
R. laṭīfa fī'l-`amal bi'l-kura; Bratislava (University 305)
R. laṭīfa fi'l-`amal bi ṣadr al-awizza; A8. of No 732
R. laṭīfa fī `ilm al-sā`āt fī'l-ayyām; Saiwun City (al-Qaf 5/4)
R. fī annahū lā yumkinu an yakūna jirm al-`ālam bilā nihāya; A15. of No 79
R. fī annahū lā yutaṣawwaru li man yartaḍi bi'l-burhān anna al-arḍ kuriyya wa'l-nās ḥawlahā; A6. of No 142
K. fī annahu lā yumkinu an yakūna al-`ālam lam yazal `alā mithāl mā nushāhiduhū; Ph5. of No 142
R. fī (bayān annahu) lā yumkinu an yajtami`a min `adadayn murab-ba`ayn `adad murabba`; M22. of No 606
al-La'ālī al-nayyirāt fī a`māl dhawāt al-asmā` wa'l-munfaṣilāt; M1. of No 1094
al-Lafẓ al-muḥarrar (al-mu`aṭ`ṭar) fī'l-a`māl bi'l-rub` almuqanṭar; A4. of No 795
al-Lafẓ al-muḥarrar fī a`māl al-rub` al-musattar; A7. of No 727
al-Lafẓ al-muṣarraḥ fī'l-`amal bi'l-rub` al-mujannaḥ; A1. of No 778
R. al-laḥn wa'l-nagham; Mu1. of No 79
K. al-lam`a; Ph5. of No 348
Laṭā'if al-fuyūḍ; M1. of No 1054
Laṭā'if al-ḥisāb; M1. of No 1270; M1. of No 1403
Laṭā'if al-ikhtirā` fī'l(-`amal bi'l)-rub` alladhī quṭbuhu min ṭaraf qaws al-irtifā`; A33. of No 873
Laṭāif al-ishāra fī taqwīm al-sayyāra; Cairo (Zaki 441)
Laṭā'if al-kalām fī aḥkām al-a`wām; A1. of No 985
K. al-lawāḥiq; A2. of No 180
Lawā'iḥ al-qamar = Lawā'iḥ al-qamar dar ikhtiyār-i sā`āt; A1. of No 898
Lawāmi` al-bayyināt fī'l-asmā' wa'l-ṣifāt; PH5. of No 535
Lawāmi` al-lubāb fī sharḥ Khulāṣat al-ḥisāb; M1. of No 1372
Lawāmi` al-ta`rīf fī maṭāli` al-tashrīf; A1. of No 931
Lawāmi` al-waṣā'il fī maṭāli` al-rasāil; A1. of No 615
Lawāzim al-amkina; G1. of No 420
M. fī anna lawāzim tajzi'at al-maqādir lā ilā nihāya qarība min amr al-khaṭṭayn alladhayn yaqrubān wa lā yultaqiyān fī'l-istib`ād; M18. of No 348
K. fī lawāzim al-ḥarakatayn; A54. of No 348
Lawḥ al-ḍabṭ = Manẓūma fī ḥisāb al-`uqūd = Manẓūma fī'l-ḥisāb bi'l-yad; M1. of No 910
K. al-layl wa'l-nahār; A2. of No 280
M. fī annahū laysa shay' mawjūd ghayr mutanāhī lā `adadan wa lā `iẓaman; M6. of No 198
Limā kāna ḥall kawn nisbat irtifā` a`ẓam al-jibāl ilā quṭr al-arḍ ka-nisbat sub` `arḍ sha`īra ilā dhirā`; A7. of No 808
Lisān al-falak al-nāṭiq `alā wajh al-ḥaqā'iq; A3. of No 501
Lubāb al-farāiḍ; M1. of No 111
Lubāb al-fiḍḍa fī sharḥ alfāẓ al-Rawḍa; A1. of No 1027
Lubāb al-ḥisāb fī `ilm al-turāb; M1. of No 588
(K.)Lubāb (fi'l-)al-ḥisāb; M1. of No 698; M2. of No 548; M1. of No 0147; M1. of No 0257; M1. of No 05; M1. of No 065; M1. of No 158; Tehran (University Ilah. 301/2)
Lubāb al-ikhtiyārāt fī ta`yīn al-awqāt; A3. of No 898
al-Lubāb fī `ilm al-ḥisāb; M1. of No 703
Lubāb al-Ishārāt; PH3. of No 535
Lubb al-lubāb fī ṭarāiq al-ḥisāb; M1. of No 759
Lubb al-mukhtaṣarāt `alā rub` al-muqanṭarāt; A18. of No 873
Lubb-i Lawā'iḥ al-qamar fī ikhtiyā-rāt; A1. of No 1238
al-Lu'lu' al-mastūr (al-manthūr) fī'l-`amal bi rub` al-dastūr; A30. of No 873
al-Lu'lu'a al-muḍī'a fī'l-`amal bi'l-nisba al-sittīniyya; M2. of No 842

Lu'lu' al-muhadhdhab fi'l-rub' al-mujayyab; Fas (Zawiya 5h.)
al-Lum'a al-maridiniyya fi sharh al-Yasaminiyya; M10. of No 873
al-Lum'a al-shamsiyya `ala'l-Tuhfa al-Qudsiyya; M17. of No 873
al-Lum'a fi hall al-sab'a; A1. of No 800
al-Luma' al-yasira fi'ilm al-hisab; M6. of No 783
Lum'a fi `ilm al-falak; A2. of No 960
Luqtat al-jawahir fi [tahdid] al-khutut wa'l-dawa'ir; A3. of No 873

-M-

Mā dhakarahu Batlamyus fi'l-bāb al-thānī min al-maqāla al-thāniyya `ashar fi marifat miqdār rujū` Zuhal wa fi'l-abwāb al-arba`a allati ba`dahu li rujū` bāqī al-kawākib; A4. of No 458
K. mā irtafa`a min qaws nisf al-nahār; A4. of No 11
Mā jarā baynahu wa bayna Abī'l-Qāsim al-Ka`bī fi'l-zamān; M3. of No 142
Mā lā budda li'l-faqīh min al-hisāb; M2. of No 749
Mā naqala Nazīf ibn Yumn al-Mutatabbib mimmā wujida fi'l-yunānī min ziyāda fi ashkāl al-maqāla al-`āshira; M1. of No 243
Mā su'ila `anhu min ra'y al-mutakallimīn fi anna al-ajsām murakkaba min jawāhir farda; M3. of No 270
Mā warada fi'l-shams fi'l-layl wa'l-nahār fi ... wa'l-riyāh fi'l-sahāb wa'l-matar fi'l-ra`d wa'l-barq fi'l-majarra wa'l-qaws wa ghayr dhālika; Princeton (Garr. 1063)
Ma`ālim al-qurba fi ahkām al-hisba; Me1. of No 679
K. al-ma`ānī fi ahkām al-nujūm; A3. of No 296
R. fi ma`ānī al-kasr wa'l-bast; M12. of No 865
K. al-ma`ārif; H2. of No 94
K. ma`ārif al-Rūm; HS1. of No 193
Ma`ārif al-taqwīm; A2. of No 875
Ma`ārij al-fikar al-wahīj fi hall mushkilāt al-Zij; A4. of No 608
Ma`ārij al-wusūl fi'l-hay`a; A1. of No 875
K. fi mabādi' al-handasa; M1. of No 285
(K.)al-Mabāhith al-mashriqiyya; PH11. of No 317; PH1. of No 535
Mabāhith Qibla; Baku (Institute of Manuscripts B 511)
Mabāhij al-taysīr bi manāhij al-taksīr; M6. of No 1074
K. al-mabda' wa'l-ma`ād; PH15. of No 317
Madākhil al-ashkāl al-mutashābiha wa'l-mutawāfiqa; Paris (Pers. 169)
Fi'l-madākhil al-shuhūr; A1. of No 645
Ma`dan al-asrār fi `ilm al-hisāb; M1. of No 1073
Ma`dan al-jawāhir; A1. of No 1053
Madd al-shabak li Saydi `ilm al-falak; A3. of No 1368
K. fi'l-madd wa'l-jazr; Mt2. of No 77
Madīna al-`ulūm; E2. of No 974
Madkhal al-nujūm wa tabā'i` al-hurūf; A6. of No 696
Madkhal; Baku (Institute of Manuscripts A 432/2)
K. al-madkhal ilā al-`adad; M12. of No 79
al-Madkhal al-hifzī ilā sinā`at al-arithmātīqā = R. al-a[ri]thmātīqā; M1. of No 256
Madkhal fi `ilm ahkām al-nujūm; Paris (6224/1)
Madkhal ilā `ilm ahkām al-nujūm; Mashhad (Imam Riza 172)
Madkhal ilā `ilm al-falak; Rome (Vatican Sbath 48/5)
al-Madkhal fi'l-handasa; M1. of No 1085
Madkhal ilā'l-handasa; M2. of No 118
K. al-madkhal ilā'l-handasa al-wahmiyya; M3. of No 180
K. al-Madkhal ilā'l-handasa fi tafsīr kitāb Uqlīdis; M3. of No 310
al-K. al-madkhal ilā `ilm ahkām al-nujūm; A6. of No 296
K. al-Madkhal fi `ilm al-nujūm; A1. of No 259
K. al-Madkhal ilā `ilm al-nujūm wa ahkāmihī; A4. of No 212
al-Madkhal ilā `ilm al-handasa; M1. of No 296
R. al-madkhal fi `ilm al-handasa; M1. of No 0188
al-Madkhal al-kabīr ilā ilm al-nujūm; A4. of No 194
Madkhal ilā kitāb Uqlīdis al-`ajīb; M23. of No 103
al-Madkhal ilā `ilm al-musīqā; Mu1. of No 100
al-Madkhal fi `ilm al-nujūm; A1. of No 309; A1. of No 818
Madkhal manzūm; Tehran (University 1542/2)
Madkhal-i manzūm; A1. of No 0163; A1. of No 07; A28. of No 606; A7. of No 1181
al-Madkhal al-mufīd wa ghunyat al-mustafīd fi'l-hukm `alā'l-mawālīd; A8. of No 635
al-Madkhal fi'l-musīqa; Mu2. of No 180
al-Madkhal ilā `ilm al-nujūm; A1. of No 110; A2. of No 39; A2. of No 99; A3. of No 118; A5. of No 402; A1. of No 567
al-Madkhal al-Saghīr; A3. of No 88
al-Madkhal al-Sāhibī; A1. of No 271
K. al-Madkhal fi sinā`at [al-mantiq] ; PH9. of No 180
R. fi'l-madkhal ilā sinā`at al-musīqā; Mu5. of No 79
al-Madkhal ilā sinā`at al-ahkām; A2. of No 78
al-Madkhal ilā sinā`at ahkām al-nujūm; A1. of No 205
K. al-madkhal ilā sinā`a al-nujūm; A2. of No 93; A1. of No 96
K. al-Madkhal fi sinā`at ahkām al-nujūm = Madkhal (Mujmal) al-usūl fi ahkām al-nujūm = Asl sinā`at al-ahkām al-falakiyya; A8. of No 308
al-Madkhal ilā sinā`at al-nujūm= al-Madkhal ilā `ilm al-nujūm; A1. of No 100
K. al-madkhal ilā sinā`at al-tibb wa-huwa Izaghūjī; ME5. of No 142

Madkhal al-ta`līm fī inshā' al-ta`siyya wa amr al-taqwīm; A1. of No 760
K. al-Madkhal ilā al-umur al-handasiyya; M9. of No 32
Mafātiḥ-i Bīst bāb; A1. of No 789
Mafātiḥ al-munajjimīn = R. dar taṣḥīḥ-i zīj-i Ulugh Beg; A3. of No 963
Mafātiḥ al-nujūm wa maṣābīḥ al-`ulūm; A2. of No 574
Mafātīḥ al-qaḍā; A3. of No 18; Tashkent (Institute for Oriental Studies 2715/1)
Mafātīḥ al-`ulūm; E1.of No 274
Mafhūm-i farāiḍ; Kharkov(University C I 64a)
K. al-Mafrūḍāt; M1. of No 167; M5. of No 103
Maghrib al-maṭālib fī ta`dīl al-kawākib; Istanbul (Topkapı Sarayı 3490)
al-R. al-maghribiyya; M2. of No 435
M. fī māhiyat al-āthār allatī tazharu fī wajh al-qamar; A18. of No 328
R. fī mahiyyat al-`aql wa'l-ibana `anha; PH2. of No 79
Fī māhiyat `ilm al-ḥisāb; St. Petersburg (Institute of Oriental Studies B 1069/2)
K. fī māhiyyāt khamsa; PH1. of No 79
R. fī māhiyyat al-nafs; PH10. of No 317
R. dar māhiyyat-i Qibla; G1. of No 963
R. fī māhiyyat al-ṣalawāt; PH7. of No 317
K. maḥlūl al-shams; A3. of No 283
Maḥlūlāt al-kawākib `alā uṣūl Ibn al-Shāṭir = al-Rawḍ al-zāhir bi ḥall wa ikhtiṣār zīj Ibn al-Shāṭir; A4. of No 1086
al-Maḥmūdiyya fi al-`Amal bi Rub` al-Dustūriyya; A7 of No 1344
Maḥsal al-maṭlūb fi'l-`amal bi rub` al-juyūb; A2. of No 848
Majalla fi'l-mūsīqa; Mu1. of No 868
M. fi'l-majarra; A26. of No 328
R. fī majāzāt dawā'ir al-sumūt fi'l-asṭurlāb = K. al-sumūt; M5. of No 299
al-Majdiyya fi'l-`amal bi rub` al-muqanṭarā;t A4. of No 815
K. majhūlāt qisiy al-kura = K. istikhrāj maqādīr al-qisiy al-wāqi`a `alā ẓahr al-kura; M2. of No 340
K. al-Majisṭī li- Baṭlamyūs; A1. of No 103
K. al-Majisṭī; A1. of No 256
al-Majisṭī al-shāhī; A1. of No 299
al-Majma`; M1. of No 0270
Majma` al-ādāb `alā mu`jam al-asmā fī mu`jam al-alqāb; HS1.of No 676
Majma` al-arqām; M1. of No 1394
Majma` al-Baḥrayn fi'l-`Amal bi Taqwīm al-Nayyirayn; A9. of No 1042
Majma` al-faḍā'il; A1. of No 1133
Majma` al-fawāid; Tashkent (Institute for Oriental Studies 1356/14)
Majma` al-gharā'ib; E1. of No 1061; Dushanbe (Institut-i Zabon u Adabiyot 386/5, 1333, 1384)
Majma` al-ḥisāb; M1. of No 1414
Majma` kawākib marṣūda; Hyderabad (Sa`idiyya Hay'a 39/1)
Majma` al-nafīsa; E1. of No 906
Majma` al-nawādir = Chahār maqāla; HS1. of No 453
Majma`-i qawā`id-i `ilm-i ḥisāb = Jāmi` al-qawā`id; M1. of No 918
Majma` rasāil asṭurlāb; Hyderabad (Central State Riyad. 149/3-13)
Majmū`a-i aḥkām Tālī` Sāl 1072; A2. of No 1354
al-Majmū` fī aḥkām al-nujūm; A2. of No 0269
al-Majmū` fi'l-farāiḍ; M1. of No 712
Majmū`a falakiyya; Beirut (University of St.Joseph 199)
Majmū`a (dar)(al-)Hay'at al-Qadīma wa al-Jadīda; A1. of No 1328; A1. of No 1173
Majmū`a-yi Hakīm al-Mulk Niẓām al-Dīn Aḥmad-i Gilānī; E1. of No 1113
Majmū`a-yi ḥisāb u farāiḍ u misāḥat; Tashkent (Institute for Oriental Studies 9014)
Majmū`a fī `ilm al-falak; A2. of No 873
Majmū`a min kalām al-sheikh Abī Bakr Muḥammad ibn Bājja al-Andalusī; Ph1. of No 436
Majmū`a rasā'il; A10. of No 1008
Majmū`a siyāq; M2. of No 1236
Majmū`a `ulūm al-riyaḍiya; M1. of No 1407 and A4 of No 1407
Majmū`at rasāil min al-`ulūm al-riyāḍiyya; Istanbul (Atıf Efendi 1714)
Majmū`at rasā'il mutawassiṭāt wa da`awī Uqlīdis; A15. of No 299
Majmū` aqāwīl al-ḥukamā al-munajjimīn al-qudamā minhum wa'l-muḥdathīn fī aḥkām taḥāwīl sinī al-mawālīd; A1. of No 454
Majmū` jadāwil falakiyya; Tripoli (Waqfs U 1178/2)
Majmū` al-rasāil; M3. of No 792
Majmū`-yi sharḥ-i Bist bāb; Oxford (Bodleian Eton 64/14)
al-K. fi'l-makāyīl wa mawāzīn wa sharā'iṭ al-ṭayār wa'l-shawāhīn; Me2. of No 348
Makhā'il al-malāḥa fī masā'il al-misāḥa; M2. of No 980
K. fi'l-makhrūṭ wa'l-kura wa'l-usṭuwāna ;M51. of No 296
Makhtebhānuth zabhnt; H1. of No 349
Makhtebhānuth zabhne; H2. of No 633
Malḥa fi'l-`amal bi rub` al-dā'ira al-mawḍū ` `alayhi al-muqanṭarāt al-shimāliyya; A6. of No 903
Malḥama-i Sheikh Wafa fī al-Kusūf va al-Zalzala va al-Maṭar va al-Bard va al-Aḥvāl al-Javviyāt al-Ukhra;. A3. of No 872
Malhamāt Daniyāl; My1. of No 567

R. ilā al-mālik al-jalīl ʿAḍud al-Dawla ibn Abī ʿAlī Rukn al-Dawla fī ʿamal ḍilʿ al-musabbaʿ al-mutasāwī al-aḍlāʿ fī'l-dā'ira bi'l-handasa al-thābita; M2. of No 223
M. fī'l-maʿlūmāt; M17. of No 328
Maʿlūmāt al-āfāq; G1. of No 1278
R. maʿmūla fī bayān al-ẓill wa taḥdīd al-jihāt wa taʿyīn al-Qibla bi'l-dā'ira; A2. of No 1272
M. fī maʿnā al ʿaql; PH7. of No 180
Fī maʿna faṣl mā bayna'l-saṭrayn min jadāwil al-awtār al-wāqiʿa fī'l-dā'ira; M2. of No 270
R. fī maʿnā al-maqāla al-ʿāshira; Istanbul (Süleymaniye AS 2742/3)
Fī maʿnā al-maqāla al-ʿāshira; Paris (2457/7)
K. maʿnā qiṭʿa min'l-maqāla al-thālitha min K. al-samā'; Ph1. of No 282
K. fī maʿnā al-ziyāra wa kayfiyyat ta'thīrihā; PH7. of No 317
K. manāfiʿ al-ʿaghdhiya wa dafʿ maḍārrihā; ME4. of No 142
K. manāfiʿ al-aḥjār; Mi1. of No 233
Manāhil al-Shamar fī Manāzil al-Qamar; A2. of No 1096
al-Manākh; A7. of No 696
K. Manālāus fī'l-ashkāl al-kuriyya; M1. of No 271; M1. of No 598
Manāzil-i kamar; A4. of No 1332
R. fī Manāzil al-Qamar; A8 of No 1063; A5. of No 1143; Cairo (Majamiʿ, 705/5)
K. al-manāẓir; Ph1. of No 328; Ph1. of No 972
Manāẓir al-ʿawālim; AG1. of No 1039
R. fī'l-manāẓir al-falakiyya; Ph14. of No 79
R.-yi manāẓir dar ʿilm-i hay'at; Aligarh (Azad Subhanallah Sup. 535)
Manāẓir al-kawākib; A1. of No 046
M. fī'l-manaẓir ʿala ṭarīq Baṭlamyūs; Ph1. of No 327
M. fī'l-manāẓir ʿala ṭarīqat Baṭlamyūs; Ph11. of No 328
K. al-manāẓir wa marāyā al-muḥriqa; Ph1. of No 039
al-Manhaj al-Muqarrab fī'l-ʿamal bi'l-rubʿ al-mujayyab; A1. of No 1256
al-Manhal al-ʿadhb al-mustaṭab fī sharḥ al-ʿamal bi'l-rubʿ al-mujayyab; A3. of No 769
al-Manhal al-ʿadhb al-zulāl fī taqwīm al-kawākib wa ru'yat al-hilāl; A17. of No 815
al-Manhal al-sākib fī maʿrifat taḥrīk al-kawākib; A2. of No 1017
Manṣubāt al-ḍarb; M15. of No 348
K. al-Manṣūrī fī'l-ṭibb; ME2. of No 142
al-R. al-Manṣūriyya fī'l-aʿdād al-wafqiyya; M6. of No 599
R. fī'l-manṭiq; PH1. of No 682
K. ʿalā'l-manṭiqiyyīn fī tawālī ḥarakatayn - intiṣār li-Thābit ibn Qurra; Me2. of No 277
R. al-manzila allatī fīhā al-shams; A6. of No 1006
Manẓūm fī ʿilm al-nujūm; A2. of No 729
Manzūm Küre Tarifnamesi; A2. of No 1387
Manẓūma dar abʿād-i ithnā ʿashara sayyāra; A8. of No 1332
Manẓūma fī'l-ʿamal bi'l-asṭurlāb; A4. of No 670
Manẓūma fī'l-asṭurlāb = Maʿālim al-awqāt wa sharḥuhu; A2 of No 791
Manẓūma fī'l-awqāt = Manẓūma fī'l-ʿamal al-rubʿ al-mujayyab; A1. of No 1373
R.-yi manẓūma fī'l-hay'a; A3. of No 1058
al-Manẓūma fī'l-ḥisāb; M1. of No 947; M1. of No 1015
Manẓūma fī ḥisāb al-yad; M2. of No 1051
Manẓūma fī ʿilm al-āla al-nujūmiyya al-maʿrūfa bi'l-asṭurlāb = Qaṣīda fī ʿilm al-asṭurlāb; A2. of No 1207
Manẓūma fī ʿilm al-ḥisāb; M2. of No 850
Manẓūma fī ʿilm al-farāiḍ wa'l-jabr wa'l-muqābala; M1. of No 838; Berlin (State 5993)
Manẓūma (Qaṣīda) fī ʿilm al-jabr wa'l-muqābala wa'l-ḥisāb; M12. of No 783
Manẓūma fī kayfiyyat al-ʿuqūd al-ḥisābiya bi'l-aṣābiʿ; Berlin (State 6011/1)
Manẓūma fī manāzil al-qamar; A3. of No 1377
Manẓūma fī'l-manāzil al-thamāniyya wa'l-ʿishrīn; A1. of No 1386
al-Manẓūma fī maʿrifat awqāt al-ṣalawāt; A12. of No 283
Manẓūma fī maʿrifat al-ẓuhrayn; A6. of No 896
Manẓūma fī'l-qabbān; Me1. of No 1015
Manẓūma fī'l-shuhūr al-rūmiyya = Qaṣīda li Sheikh ʿAbdallāh al-Yāfiʿī; A2. of No 739
Manẓūma fī silk al-nujūm; A1. of No 798
Manẓūma fī taṣārīf al-aṣābiʿ wa ʿuqd al-aʿdād; Rabat (General 2446)
Manzūma fī'l-tawāqīt; A4. of No 1207
Manẓūma fī'l-zarqāliyya; A3. of No 1207
Manẓūmat Ashkāl al-taʾsīs yā urjūza fī'l-handasa; M6. of No 1058
Manẓūmat ḥisāb al-yad; M11. of No 487
Manẓūmat al-mujayyab = R. fī'l-ʿamal bi rubʿ al-dastūr; A4. of No 1004
Manẓūmat al-tuḥfa al-qudsiyya fī ʿilm al-farāiḍ; (Rawda Hairi 5/7)
Manẓūmat al-yawāqīt fī'l-mawāqīt; Istanbul (Süleymaniye, Laleli 2767/1)
R.-yi maqādir-i awqāt-i namāz; A4. of No 1078
M. fī'l-maqādīr al-munṭaqa wa'l-ṣumm; M1.of No 204
R. fī'l-maqādīr al-mutashārika wa'l-mutabāyina; M1. of No 321

Fi'l-maqādīr al-ṣammā'; Paris (2457/34)

R. fī al-maqāla al-rābi`a `ashara wa'l-khāmisa `ashara min kitāb Uqlīdis; M31. of No 79

K. Maqala fil-tamām al-Makhruṭāt; M31. of No 328

K. al-maqālāt fi'l-ḥisāb; M2. of No 696

K. al-maqālāt wa ḥall al-mushkilāt; A2. of No 989

K. maqālāt al-islāmiyīn wa ikhtilāf al-muṣallīn; PH1. of No 158

K. maqālāt al-rafī`a fī uṣūl `ilm al-ṭabī`a; Ph1. of No 180

K. maqālīd `ilm al-hay`a mā yaḥduthu fī basīṭ al-kura; M7. of No 348

Maqālīd al-`ulūm fi'l-ḥudūd wa'l-rusūm; E2. of No 788

Maqāṣid al-alḥān; Mu3. of No 807

Maqāṣid al-awālī bi-Qalā'id al-La'ālī; AG1. of No 0224

Maqāṣid dhawī al-albāb fi'l-`amal bi'l-asṭurlāb; A1. of No 519; A1.of No 661

Maqāṣid al-falāsifa; PH4. of No 415

Maqāṣid al-ṭullāb fī istikhrāj al-masā'il bi'l-ḥisāb; M27. of No 873

al-Maqṣad al-asnā fī ḥall muqfal yassārat Ibn al-Bannā; A3. of No 1027

al-Maqṣad al-ḥasan; E1. of No 1115

R. fi'l-maqūlāt al-`ashara; PH2. of No 79

M. fī marākiz al-athqāl; Me3. of No 328

Fī marākiz al-athqāl wa ṣan`at al-qabbān; Me3. of No 423

K. marākiz al-dawā'ir al-mutamāssa `alā'l-khuṭūṭ bi-ṭarīq al-taḥlīl; M15. of No 277

Marāsim al-intisāb fī ma`ālim (`ilm) al-ḥisāb; M2. of No 931

K. al-Marāṣıd li Tabyīn fīhi Jāmi` al-Maqāṣıd; A10. of No 1390

K. al-marāyā; Ph1. of No 9

(K)(R.) fi'l-marāyā al-muḥriqa; Ph10. of No 79; Ph2. of No 118; Istanbul (Süleymaniye AS 2676)

M. fi'l-marāyā al-muḥriqa bi'l-dawā'ir; Ph7. of No 328

M. fi'l-marāyā al-muḥriqa bi'l-quṭū`; Ph6. of No 328

Ma`rifa al-Qibla; A7. of No 972

R. fi Ma`rifa Waḍ` al-Muqanṭarat; A4. of No 987

R. fī ma`rifat ab`ād qalīla li'l-jibāl; M37. of No 79

R. fī ma`rifat al-ab`ād wa'l-ajrām; Cairo (Mīqāt 573/4)

R. dar ma`rifat-i āftāb az kura; A18. of No 348

R. fī Ma`rifat al-ālāt li Avqāt al-Salāt ;A2. of No 1315; A3. of No 1315

Dar ma`rifat-i ālāt-i raṣad u asṭurlāb u ghayrihī; Berlin (State Pers. 326/5)

R. dar ma`rifat-i alwān u rang-hā; Mashhad (Imam Riza 69)

Ma`rifat a`māl asturlāb; A1. of No 1352

R. fī ma`rifat al-asṭurlāb; A1. of No 1033; A4. of No 595

Ma`rifat al-a`māl bi'l-asṭurlāb; A2. of No 023

R. fī ma`rifat `amal al-jayb bi'l-thumn; Cairo (Mīqāt 781/2)

al-R. fī ma`rifat al-`amal bi'l-rub` al-mujayyab; Berlin ((IGMN)II. 62)

R. dar ma`rifat-i `amal-i rub`-i mujayyab; (Rampur Rada 2100)

R. dar ma`rifat-i a`māl-i rub` mujayyab-i āfāq; A1. of No 0248

R. dar ma`rifat-i `amal-i rub`-i mujayyab āfāqī; Hyderabad (Osmania University 290); A1. of No 1077

R. dar ma`rifat-i a`māl bi-rub`-i muqanṭar; A1. of No 0100

R. dar ma`rifat-i `amal bā-rub`-i shikkāzī; A8. of No 940

Ma`rifat `amal bi'l-samt bi'l-ẓill wa bi'l-irtifā`; A7. of No 41

R. dar ma`rifat-i `amal-i taqwīm; Hyderabad (Salar Jung Hay'a 32)

R. dar ma`rifat-i `anāṣir u kāināt al-jaww; Ph1. of No 666

Ma`rifat `arḍ al-balad; G2. of No 41

K. fī ma`rifat al-ashhur wa'l-ahilla; Baghdad (of Ya`qub Sarkis 119/1)

Fī ma`rifat asmā` al-bilād wa aṭwālihā wa inḥirāfiha; G1. of No 1134

(K.) (R.) (dar) ma`rifat (-i)(al-)asṭurlāb; A5. of No 308; A3. of No 0279; St. Petersburg (Institute of Oriental Studies B 837/3); A1. of No 301; A1. of No 0250; A5. of No 940; A1. of No 0180; Hyderabad (Central State Riyad. 159a); Hyderabad (Salar Jung Hay'a 34); Mashhad (Mawlawi 497/2, 520/3); (Rampur Rada 1183. = Hyderabad riyad. 159a); Tehran (Dihkhuda 270.); Tehran (University Adab. 92/3); Tehran (University Ilah. 387/5)

K. -i ma`rifat-i asṭurlāb-i shimālī; A2. of No 709

K. fī ma`rifat al-asṭurlāb al-musaṭṭaḥ wa'l-`amal bihi; A1. of No 541

Ma`rifat-i asṭurlāb-i shimālī; A2. of No 694

R. fī ma`rifat awā'il al-shuhūr bi'l-ruy`a; A1. of No 878

Fī ma`rifat al-awqāt; Fas (Zawiya 13d)

R. fī ma`rifat awqāt al-`ibādāt; A3. of No 1390

R. fī ma`rifat awqāt al-ghurūb; A2. of No 1063

R. fī ma`rifat awqāt al-ṣalāt wa jihat al-Qibla min al-rub` al-āfāqī; A6. of No 797

Ma`rifat al-Awqāt wa al-Qibla bi Ghayr āla; A12. of No 1008

Ma`rifat awqāt al-ṣalāt bi'l-aqdām wa ma`rifat awwal shahri min al-sinīn al-mustaqbala wa ma`rifat kam kull faṣl min al-thamāniyya wa'l-`ishrīn al-najm; London (British Sup. 774/1)

R. fī ma`rifat ayyām al-sana wa fī ayy yawm al-shahr min kull shahr; Baghdad (Ya`qub Sarkis 119/2)
R. fī ma`rifat bu`d al-shams `alā saṭḥ al-munḥarif wa ma`rifat jihat al-Qibla; A13. of No 1367
R. fī ma`rifat bu`d al-shams `an markaz al-arḍ; A1. of No 43
R. fī Ma`rifat al-Dā'ir wa Faḍlihī wa waḍ` al-Sā`āt va Khuṭūṭ faḍl al-Dā'ir `alā al-Asṭiḥa al-Muwāziya li'l-Ufuq; A22. of No 1323
R. fī ma`rifat ghurrat al-shahr fī ayy yawm hiya; Baghdad (Ya`qub Sarkis 119/3)
Ma`rifat dhāt al-ḥalaq wa'l-kura wa'l-asṭurlāb; A3. of No 471
R. fī ma`rifat al-ḥawādith al-sufliyya min dalālāt al-ashkhāṣ al-`ulwiyya; A3. of No 908
R.-yi ma`rifat-i hay'at u aflāk wa anāṣir arba'; Hyderabad (Central State Riyad. 169)
Fī ma`rifat ḥisāb manāzil al-qamar; A8. of No 1004
Ma`rifat-i ḥisāb dar sālhā-yi gūnā-gūn; M3. of No 706
K. fī ma`rifat al-ḥiyal al-handasiyya = al-Jāmi` bayna'l-`ilm wa'l-`amal al-nāfi` fī ṣinā`at al-ḥiyal; Me1. of No 563
Ma`rifat ḥulūl al-shams fī'l-manāzil al-Sha'miyya wa'l-Yamaniyya; Hyderabad (Osmania University 1552)
R. fī ma`rifat al-`ibādāt wa jihat al-Qibla; A4. of No 1390
Fī ma`rifat ikhrāj al-Qibla; G2. of No 813
Fī ma`rifat inḥirāf al-ḥīṭān; Berlin (State 5730/3)
Fī ma`rifat intiqāl al-fuṣūl fī'l-aqālīm; Berlin (State 5730/2)
Ma`rifat-i irtifā`; Baku (Institute of Manuscripts A 55/1)
R. fī ma`rifat al-irtifā`; Istanbul (Süleymaniye AS 2627)
R. fī ma`rifat istikhrāj a`māl al-layl wa'l-nahār; St. Petersburg (Institute of Oriental B 2999/10)
R. fī ma`rifat iṣṭilāḥāt misāḥat al-ashkāl wa mā yata`allaqu bihī; Princeton (Yehuda 3171)
R. fī ma`rifat istikhrāj awqāt al-ṣalāt; Beirut (University of St.Joseph 194)
R. (mukhtaṣara) fī ma`rifat istikhrāj awqāt al-ṣalāt wa shay' min al-tawārīkh wa'l-a`māl al-falakiyya min ghayr āla; A1. of No 964
R. fī ma`rifat istikhrāj al-taqwīm; Cairo (Tal`at falak turki 20)
Dar ma`rifat-i jihat-i Qibla; Paris (Pers. 772/6)
Fī ma`rifat-i kawākib-i sā`āt al-nahār wa'l-layl; A1. of No 0154
Ma`rifat kayfiyyat al-arṣād wa'l-`amal bi-dhāt al-ḥalaq; A6. of No 46
R. dar ma`rifat-i khaṭṭ-i niṣf al- nahār u Qibla; Tehran (Milli - National 782/2)
R. fī ma`rifat khawāṣṣ al-ḥuṭūṭ al-mutawāziyya wa a`rāḍihā al-dhātiyya wa'l-mutaqāṭi`a; M1. of No 583
R. fī ma`rifat khusūf al-qamar; A1 of No 1214
R. fī ma`rifat al-khusūf wa'l-kusūf; Istanbul (Süleymaniye, Laleli 2723/1)
R. dar ma`rifat-i kura; Hyderabad (Central State Riyad. 171); Hyderabad (Salar Jung Hay'a 33, 35/2, 37/4, 40); Hyderabad (Salar Jung Hay'a 7/1-2, 37/1-2); London (British 2324.); London (India Office 2528.); Madras (Mysore 637.); Oxford (Bodleian Pers. I 1506); (Rampur Rada 1180); (Shiraz Shahchirag 676/1); Aligarh (Azad Abd al-Hayy 133/125)
R. dar ma`rifat-i kura u asṭurlāb; Hyderabad (Salar Jung Hay'a 37/1)
K. fī ma`rifat al-kura wa'l-`amal bihā; A4. of No 46
R. fī ma`rifat mā maḍā min al-layl min sā`āt bi-qiyās al-kawākib al-thābita wa'l-ṭāli`; A5. of No 212
R. fī ma`rifat al-maghībāt; Baghdad (Waqfs Sup. 340)
R. fī ma`rifat manāzil al-qamar wa'l-istidlāl bihā fī ma`rifat sā`āt al-layl; Cairo (Falak 3824/12)
Fī ma`rifat al-manāzil wa'l-burūj; Leipzig (830/6)
Ma`rifat manzil al-qamar fī'l-burūj; Paris (2639)
K. ma`rifat maṭāli` al-burūj bayna arbā` al-falak; A4. of No 137
R. fī ma`rifat mawāḍi` arkān al-Ka`ba min al-jihāt al-arba`; A5. of No 813
R. fī ma`rifat miqdār al-bu`d min markaz al-arḍ wa makān al-kawākib alladhī yanqaḍḍu bi'l-layl; A2. of No 277
Ma`rifat al-misāḥa; M1. of No 298
K. ma`rifat misāḥat al-ashkāl al-basīṭa wa'l-kuriyya; M3. of No 74
K. ma`rifat misāḥat al-ashkāl wa taḥrīr Uqlīdis; Istanbul (Beyazıt State, Veliyuddin 2320)
R. fī ma`rifat al-murakkab wa'l-basīṭ; M13. of No 865
K. ma`rifat al-nisab al-ta'līfiyya; Oxford (Bodleian I 1026/2)
K. ma`rifat al-nujūm; A1.of No 61
Fī ma`rifat al-nujūm wa'l-mawāqīt; Berlin (State 5748)
K R. fī ma`rifat taqwīm al-mushmis; Ashqabad (2537/7)
(R.) (fī)(dar) ma`rifat al-Qibla; A7. of No 1108; A11. of No 1058; A4. of No 983; Rasht (Public Majami` 71/7)
R. fī ma`rifat al-Qibla; Tashkent (Institute for Oriental Studies 5630/4)
R. fī ma`rifat al-qisiy al-falakiyya ba`ḍuhā min ba`ḍ bi-ṭarīq ghayr ṭarīq ma`rifatihā fī'l-shakl al-qaṭṭā` wa'l-nisba al-mu'allafa; M6. of No 299
fī ma`rifat quwwat al-adwiya al-murakkaba; ME2. of No 79
R. fī ma`rifat ramz al-taqwīm; A2. of No 520

R. fī ma`rifat rub` al-shakāziya li'l-a`māl al-falakiyya; A8. of No 903
R. dar ma`rifat-i rub`; A4. of No 914
Ma`rifat sā`a al-mashriq fī kull balad `alā mā `amila Baṭlamyus min quṭr al-falak; Istanbul (Süleymaniye AS 4830/17)
(R.) Ma`rifat samt al-Qibla; A7. of No 686; A6. of No 1176; A1 of No 093; A1. of No 0151; Tehran (University 1971/3); Baku (Institute of Manuscripts B 5775/1); A1. of No 0222
R. fī ma`rifat samt al-Qibla min dā'ira hindiyya ma`rūfa; A9. of No 802
Ma`rifat samt min qibal al-irtifā`; A6. of No 41
R. fī ma`rifat al-sā`āt; A21. of No 990; A1. of No 0119
R. dar ma`rifat-i sā`āt wa sa`d wa naḥs-i ayyām; A1. of No 300
M. fī ma`rifat al-samt li-ayy sā`a aradta wa fī ayy mawḍi` aradta; A1. of No 82
Ma`rifat al-sana al-shamsiyya; Rome (Vatican Borg. 969/3)
Ma`rifat si`at al-mashriq fī kull balad; A5. of No 41
R. fī ma`rifat si`at al-mashriq min ghayr istikhrāj al-muyūl al-juz`iyya; A1. of No 305
K. fī ma`rifat ṣu`ūd al-kawākib fī ru'ūs jawzahirātihā wa hubūṭihā minhā; A9 of No 79
(R.)(dar)Ma`rifat-i taqwīm; A1. of No 0221; Hyderabad (Central State Sham. 165); Tbilisi (K 179); A1. of No 0214; A15. of No 938; Mosul (Jami` Mosque 132/1); Rayy (`Abd al-`Aẓim 238/2); Tehran (University 2160/3, 3382/8, 3511/5, 3821, 4390/2.); A14. of No 1058
R. fī ma`rifat al-taqwīm wa'l-asṭurlāb; A1. of No 341
Ma`rifat-i taqwīm u asṭurlāb; Tehran (University 2160/2)
Fī ma`rifat taqwīm al-qawākib al-khamsa; A2. of No 31
Dar ma`rifat-i ta'rīkh-i Khatay; Calcutta (Asiatic Society of Bengal Curz. 677/11)
R. fī Ma`rifat al-Taqāwīm; A1. of No 974
Ma`rifat taqwīm samt al-Qibla li ayyi baladin shi`ta; A9. of No 41
Ma`rifat-i taqwīm; A2. of No 1271
R. fī Ma`rifat al-Ufuq al-Ḥadīth; A22. of No 1004
R. fī ma`rifat wad` bayt al-ibra `alā'l-jihāt al-arba` = Bayt al-`ibra; Ph1. of No 1008
R. fī ma`rifat waḍ` bayt al-ibra; Paris (5311/3)
R. fī Ma`rifat Waḍ` al-Jadwal al-Shāmil li Faḍl Dā'ir wa al-Sumūt; A41. of No 888
R. fī ma`rifat waḍ` khayt al-musātara wa waḍ` khuṭūṭ faḍl al-dā'ir takhtahi; A9. of No 856
R. fī ma`rifat waḍ` khuṭūṭ faḍl al-dā'ir wa qisiy al-`aṣr wa'l-bāqī minhu li'l-ghurūb wa'l-sā`āt al-mustawiyya wa'l-zamāniyya bi'l-a`mida al-thābitā; A2. of No 880
R. fī Ma`rifat Waḍ` Rub` al-Dā'ira al-Mawḍū`a `alayhi al-Muqanṭarāt; A15. of No 933
K. fī Ma`rifat Waḍ` al-Rukhāmāt li `Arḍ "mā" ; A14. of No 933
K. fī ma`rifat waḍ` al-sā`āt; A6. of No 1004
R. fī ma`rifat al-wazn al-qā'im wa ṭarḥ al-iyār minhu; Me2. of No 1214
R. dar ma`rifat-i watar-i thulth-i qaws; M1. of No 0157
R. fī ma`rifat mā yurā min al-samā wa'l-baḥr ;Ph2. of No 277
Ma`rifat al-zawāl wa'l-Qibla; A1. of No 0237
Ma`rifat-nāma; E1. of No 1332
al-Marqā al-a`lā fī sharḥ Sullam al-samā'; A1. of No 1165
Marqā al-ma`ālī fī awqāt al-ayām wa'l-layālī A1. of No 1192
Marqa`at al-samt; A1. of No 010
Marqāt al-samā; A4. of No 845
al-K. al-ma`rūf bi-'l-sābi` wa-'l-`ishrīn; A2. of No 18
Maṣābiḥ al-anwār wa mafātīḥ al-asrār fī a`māl al-layl wa'l-nahār; A1. of No 581
al-Maṣābīḥ al-sulṭāniyya fī'l-ab`ād al-nujūmiyya wa'l-ajrām al-basīṭiyya; Cambridge (University Sup. 521/8)
R.-yi masā'il; A8. of No 972
K. masā'il al-a`dād; M1. of No 90
Masāil `adadiyya laṭīfa ḥasana; Paris (2457/35)
R. dar masā'il `adadiyya wa ṭarīq-i taṣḥīḥ-i ān = R. dar `ilm-i farā'iḍ; M1. of No 1200
K. al-masāil allatī hiya ghayr maḥdūda; M7. of No 124
al-Masā'il al-balkhiyya fī'l-ma`ānī al-muta`alliqa bi-inqiṣār al-ṣinā`a; A47. of No 348
Masā'il falsafiyya su'ila `anhā; PH11. of No 180
Masā'il handasiyya mutarjama bi'l-Muhdāt wa hiya muqaddimāt li-masā'il jabriyya ustukhrijat bi'l-handasa; Mashhad (Imam Riza 5258/3); Oxford (Bodleian I 943, 987/42. = Mashhad 5258/3, Tehran Mu`tamid)
Masā'il (al-)handasiyya; M8. of No 458; M1.of No 83; M1. of No 732
Masā'il handasiyya mutafarriqa li-ba`ḍ al-`ulamā; M19. of No 277
Masāil (fī)(al-)hay'a; A4. of No 1058; A1. of No 031
Masāil fī'l-ḥisāb; Kaduna (Jos Museum and Lugard Hall 944)
Masā'il al-ḥisāb wa'l-farāid; Dushanbe (Ferdowsi 1865)
Masāil-i hisāb u handasa; Tashkent (Institute for Oriental Studies 3894/3)
al-Masail al-ḥisābiyya – sharḥ Nukāt al-arithmāṭiqī; M1. of No 0103

R. fi'l-masāil al-ḥisābiyya fi'l-jabr wa'l-muqābala; M19. of No 606
Masā'il ḥisābiyya fi ma`rifat mā yaḥtāju ilayhi al-muḥāsib; M3. of No 1318
K. masā'il fi `ilm aḥkām al-nujūm; A1. of No 95
R. fi masā'il `ilm al-waqt bi ghayr āla; A4. of No 1032
Masāil al-jabr wa'l-muqābala; M1.of No 541; Leiden (University 199/5); M2. of No 792
Masāil-i jabriyya; M1. of No 706
Masāil kusūr; M1. of No 0167
al-Masāil fi'l-khilāf bayna al-baṣriyīn wa'l-baghdādiyīn; PH1. of No 159
Masāil fi mi'a wa thalāthīn bāb; A2. of No 27
al-Masā'il al-mufīda wa'l-jawābāt al-sadīda fi `ilal zīj al-Khwārizmī; A22. of No 348
al-Masāil al-mukhtāra; M5. of No 174
K. fi'l-masā'il al-mukhtāra allatī jarat baynahū wa bayna muhandisī Shirāz wa Khurāsān wa ta`līqātihī; M18. of No 296
Masā'il fi'l-murakkabāt; M5. of No 815
K. fi l-masāil al-mushawwiqa; Ph1. of No 103
Masā'il mutafarriqa handasiyya; M1. of No 269; M1. of No 336
Masāil dar nawādir-i muḥāsibāt; Paris (Pers. 772/16)
Masā'il su'ila `anhā Thābit ibn Qurra al-Ḥarrānī; PH1. of No 103
al-Masāil al-ṭabī`iyya; Ph1. of No 104
M. fi masā'il al-talāqī min mulāḥ al-ḥisāb; M28. of No 328
Masāil thamāniya fi'l-ḥisāb = al-R. al-burhāniyya; M3. of No 527
al-Masā'il wa'l-ajwiba fi'l-ḥisāb; M6. of No 309
al-Masā'il wa'l-jadāwil li'l-muqanṭarāt; Patna (Bankipore 2469/11)
Masā'il yumtaḥanu bihā al-munajjimūn; A7. of No 205
R. fi'l-masākin; G3. of No 79
Fī mas'ala `adadiyya mujassama; M26. of No 328
Mas`ala fi `amal al-mutawassiṭayn wa qismat zāwiya ma`lūma bi- thhalāthat aqsām mutasāwiyya = Qismat al-zāwiya al-mustaqīmat al-khaṭṭayn bi-thhalāthat aqsām mutasāwiyya; M20. of No 103
Kitab al-mas`ala allatī alqāhā `alā Sanad ibn `Alī; A6. of No 74
K. al-mas`ala allati jarat bayna Sanad wa bayna Aḥmad; A7. of No 74
Mas'ala fi da`wā Uqlīdis; M1. of No 044
Mas'ala handasiyya; M2. of No 541
R. fi mas'ala min `ilm al-ḥisāb; M1. of No 1237
Mas'ala fi istikhrāj ab`ād al-marākiz; Patna (Bankipore 2469/10)
R. fi mas`alat al-jadal fi awā'il sharḥ Qāḍi-zāda `alā Mulakhkhas al-Jaghmīnī; A1. of No 959
Mas'ala min kitāb Arshimīdis; Tehran (University 1751/5)
Mas`ala fi'l-mūsīqa; Mu1. of No 103
Mas'ala sa'alahu `anhā ba`d al-massāḥ wa jawābuhū; M41. of No 296
Mas'alat Arshimīdis fi misāḥat al-muthallath; M6. of No 256
Mas'alatān handasiyyatān; M20. of No 277
Maṣāliḥ al-abdān wa'l-anfus; ME1. of No 156
K. masālik al-abṣār fi mamālik al-amṣār; G1. of No 717
K. al-masālik wa'l-mamālik; G1. of No 120; G1. of No 213; G1. of No 214
R. al-Masarrāt fi `Ilm al-Mīkāt; A20. of No 990
al-Maṣḥaf al-mukhtara' fi mu`jizāt ṣinā`a al-`adad; M5. of No 487
Mashā`ir al-shu`arā; L1. of No 1039
Mashāriq al-aḍwā' fi ma`rifat kammiyya mā bayna ṭulū` al-fajr wa ṭulū` al-shams; A5. of No 938
Mashāriq fi fann al-riyāḍa; M2. of No 995
Mashriq al-shamsayn dar `ilm-i manāẓir u mirāyā; Ph1.of No 707
Mashriq al-shamsayn wa iksīr al-sa`ādatayn; A12. of No 1058
K. al-maṭāli;` A1. of No 671)
Maṭāli` al-āfāqī; A3. of No 818
Maṭāli` al-budūr fi'l-ḍarb wa'l-qisma wa'l-judhūr; M1. of No 1323
K. fi maṭāli` al-kawākib wa'l-burūj wa ghayrihī; Istanbul (Süleymaniye AS 2671/1)
R. fi'l-maṭāli wa'l-nujūm; Baghdad (Waqfs Sup. 327)
Fī maṭāli` wa ṭūl wa `arḍ al-qamar wa'l-hilāl; A14. of No 888
Maṭāli` al-'ufuqī; A3. of No 259
Maṭāli` al-`ulūm fi `ulūm al-awā'il wa'l-ḥisab; M1. of No 257
al-Maṭālib al-ilāhiyya fi mawḍū `āt al-`ulūm; E1. of No 869
Maṭālib juz'iyya fi mayl al-muyūl al-juz'iyya wa'l-maṭāli` fi'l-kura al-mustaqīma; M8. of No 194
K. al-maṭar; Mt1.of No 29
Maṭla` al-anwār; A5. of No 914; M1. of No 952
Maṭla` al-anwār wa maṭla` al-anẓār; Ph1. of No 1080
Maṭla` `alā masā'il al-Muqni`; A3. of No 1166; A1. of No 1362
Maṭla` al-nujūm wa majma` al-`ulūm; E1. of No 437
al-Maṭlab al-kabīr fimā ya`taliqu bi qaṣīdat `Abd al-Raḥmān ibn `Abd al-Raḥīm; A11. of No 1207
al-Maṭlab fi'l-rub` al-mujayyab; A9. of No 873; A6. of No 1207
al-Maṭlab al-sirrī fi `amal al-asṭurlāb al-kurī; Cairo (Tal`at mīqāt 155/2)
Matn al-nuzha fi'l-ḥisāb; M1.of No 029
K. maṭraḥ al-shu`ā `āt; A2. of No 107

R. fī maudī` al-shams wa maylihā wa kammiyyat masīrihā; A4. of No 68
K. al-ma`una fi `ilm al-ḥisāb al-hawā'ī; M1. of No 783
Ma`una al-ṭullāb fi ma`rifa al-ḥisāb; M1. of No 741
Ma`unat al-ṭullāb; A2. of No 1194
Mawāḍi`-i thawābit; Tehran (University 957/1)
al-Mawāhib al-saniyya fi aḥkām al-waṣiyya; M15. of No 873
al-Mawāhib al-saniyya `alā'l-Urjūza al-Yāsamīniyya = al-Ma`īn `alā fahm Urjūzat Ibn al-Yāsmīn; M1. of No 799
K. al-mawā`iẓ wa'l-i`tibār fi dhikr al-khiṭaṭ wa'l-āthār; G3. of No 810
K. al-mawālīd; A12. of No 88
Mawāqi` al-nujūm; Istanbul (Millet, Feyzulla 274)
R. fi'l-mawārīth; Cairo (Riyad. 660/2)
K. al-mawāzīn al-`adadiyya; M7. of No 219
Mawḍi` al-adilla li ma`rifat ru'yat al-ahilla I; Oxford (Bodleian 1034/1)
al-K. al-mawsūm bi'l-dawā'ir; M44. of No 296
al-Maẓāhir al-Aḥmadiyya fi sharḥ al-Nasama al-nafḥiyya; A1. of No 1218
Mẹnārath Qudshe; PH2. of No 633
K. al-mi'a wa'l-`ishrīn `alā ṭarīq jadwal al-sittīn; Cairo (Fadil mīqāt farisi 8/1 = Istanbul BU 4645; SM AS 2698)
Mi'at mas'ala wa khamsa min Uṣūl Uqlīdis; M23. of No 606
Miftāḥ al-abwāb li'l-aḥibāb; M1. of No 09
Miftāḥ Ajniḥat al-ghurāb; M3. of No 1313
Miftāḥ al-asbāb fi `ilm al-zījāt; A10. of No 802
Miftāḥ al-asrār; A1. of No 0259
Miftāḥ al-asrār fi `ilm al-falak al-dawwār; A1. of No 1116
Miftāḥ-i Bīst bāb dar ma`rifat-i asṭurlāb; A1. of No 914
Miftāḥ-i Bīst bāb London (India Office 2252/2)
Miftāḥ-i Bīst bāb-ı asṭurlāb; A1. of No 0268
Miftāḥ al-fā'id fi `ilm al-farāiḍ; M2. of No 560
Miftāḥ al-ḥikma fi'l-hay'a; A1. of No 091
Miftāḥ al-ḥisāb; M1. of No 802; M1. of No 0260; M2. of No 1035; M26. of No 783
Miftāḥ al-Ḥussāb; M1. of No 975
Miftāḥ `ilm al-hay'a; A43. of No 348
Miftāḥ-i kunūz-i arbāb-i qalam wa misbāḥ-i rumūz-i aṣḥāb-i raqam = R. fi' l-ḥisāb; M1. of No 821
Miftāḥ al-mu`āmalāt fi'l-ḥisāb; M2. of No 301
Miftāḥ al-mughayyab fi'l-`amal bi'l-rub` al-mujayyab; A5. of No 1285
Miftāḥ al-mushkilāt; M1. of No 1345
Miftāḥ al-nujūm; A1. of No 03
Miftāḥ al-sa`āda wa miṣbāḥ al-siyāda; E1. of No 974
Miftāḥ al-`ulūm; E1. of No 558
Fī miḥnat al-munajjimīn; A6. of No 233
K. fi miḥnat al-nujūm; A28. of No 103
K. al-milal wa'l-niḥal; H1. of No 461
Min kalām Abū'l-Futūḥ ibn al-Surā; M7. of No 458
K. al-minbar fi misāḥat al-jawāhir al-mukhtaliṭa li istikhrāj majhūlihā; Ph1. of No 487
al-Minhāj al-aqrab li taṣḥīḥ mawḍi` al-`Aqrab; A1. of No 1340
K. al-minhāj al-fākhir fi `ilm al-baḥr al-zākhir; AG1. of No 956
Minhāj al-taḥqīq; A2. of No 1078
Minhāj al-ṭālib li ta`dīl al-kawākib; A1. of No 696
Fi'l-mīqāt; A3. of No 1002
R. fi'l-mīqāt; A49. of No 873
R. fi'l-mīqat wa samt al-Qibla; A5. of No 1176; A4. of No 0224
K. -i Mīqātı; M2. of No 884
R. fi miqdār mā yurā min al-samā; Ph1. of No 277
K. al-miqyās; A3. of No 58
al-Miqyās al-murajjaḥ fi'l-`amal bi'l-asṭurlāb al-musaṭṭaḥ; A14. of No 348 Cairo (Tal`at mīqāt 155/1)
Miqyās al-shams; A2. of No 1334
K. al-miqyās li'l-zawāl; A5. of No 6
Mir'ā `ālam fi'l-raṣad; Istanbul (Süleymaniye, Yahya 280)
Mi`rāj al-albāb ilā `ilm al-ḥisāb; M2. of No 1256
Mir'āt al-`ajā'ib fi'l-`amal bi'l-jayb al-ghā'ib; A2. of No 1121
Mir'āt al-aflāk fi'l-aḥkām wa'l-hay`a; A1. of No 995
Mir'āt al-aslāk li kurat al-aflāk; AG3. of No 956
Mir'āt al-ḥisāb; M1. of No 1136; M2. of No 1317
Mir`āt(-i) (al-)kā'inā;t A28. of No 990; A2. of No 977
Mir`āt al-mamālik; G1. of No 977
Mir'āt al-qulūb; M1.of No 1350
Mir'āt-i Sulaymānı; M1. of No 0179
Mir'āt al-zamān; A2. of No 653
Mirqāt al-samā; A1. of No 1000
K. fi'l-mirwaḥa wa asbab al-rīḥ; Mt1. of No 118
(R.)(K.) (fi)(al-)misāḥa; M1. of No 164; M2. of No 115; M2. of No 320; M5. of No 421; M2. of No 546; M4. of No 425; M2. of No 804; Tehran (University 2092/5.); M1. of No 170; M1. of No 242; M1. of No 315; M7. of No 808; M3. of No 1348; Hyderabad (Central State Sham. 129); Hyderabad (Salar Jung Riyad. 14. = Hyderabad Sham. 129); Patna (Bankipore 1732. = Hyderabad Sham. 129).
K. fi'l-misāḥa`alā jihat al-Uṣūl; M6. of No 327
K. al-misāḥa al-musammā Bughyat al-ḥisāb; Istanbul (Süleymaniye, Laleli 2757)
K. al-misāḥa wa'l-handasa; M9. of No 124
R. fi'l-misāḥa wa'l-waṣāyā; Berlin (State 5955)

Misāḥat; (Budapest, Oct. 266)
Misāḥat al-araḍī; M8. of No 124
K. fī misāḥat al-ashkāl al-musaṭṭaḥa wa'l-mujassama; M12. No 103
R. fī misāḥat aywān; M27. of No 79
R. fī misāḥat dhawāt al-nawāḥī; M2. of No 181
K. misāḥat al-ḥalaq; M1. of No 224
K. misāḥat kull muthallath mukhtalif al-aḍlā` min jihat aḍlā`ihī; M2. of No 344; M3. of No 344
K. misāḥat al-mujassam al-mukāfī'; M18. of No 277; M15. of No 328
M. fī misāḥat al-mujassamāt al-mukāfiyya; M11. No 103
Misāḥat al-mukhammas wa'l-mu`ashshar; M3. of No 124
M. fī misāḥat al-muthallath min jihat aḍlā`ihī; M1. of No 483; M8a. of No 342
K. fī misāḥat qaṭ` al-khuṭūṭ; M21. of No 103
K. fī misāḥat qaṭ` al-makhrūṭ alladhī yusammā al-mukāfī'; M10. No 103
K. fī misāḥat al-qaṭ` al-mukāfi; M3. of No 174
K. fī misāḥat al-ukar bi'l-ukar; M22. of No 296
al-Miṣbāḥ; A2. of No 860
Misbāḥ al-ḥisāb; Hyderabad (Central State Riyad. 134.); Hyderabad (Osmania University 334.= Hyderabad riyad.134); Tehran (University Ilah. 134)
Miṣbāḥ al-kunūz; M1. of No 911
Mishkāt al-ṣawāb fī sharḥ Khulāṣat al-ḥisāb; M1. of No 1306
al-Misk al-`ā ṭir fī ḥall Zīj Ibn al-Shāṭir; A1. of No 1038
Mi`yār al-ash`ār; L1. of No 606
Mi`yār al-awqāt; A1. of No 1335
Mi`yār al-sa`āt; Tehran (University 950/1)
Mi`yar al-`uqūl-i jarr-i thaqīl; Me1. of No 317
R. fi'l-mīzān; Me1. of No 193
R.-yi mīzān-i āb; Hyderabad (Central State Riyād. 163)
Mīzan al-ḥaqq fī ikhtiyār al-aḥaqq; H2. of No 1145
Mīzān al-ḥikam = Fī ikhtiyāl ma`rifat miqdāray al-dhahab wa'l-fiḍḍa fī jism murakkab minhumā; Me1. of No 420
K. mīzān al-ḥikma; Me1. of No 476
Mīzān al-ḥisāb Jadid; Hyderabad (Central State Jadid 1600)
Mīzān al-kawākib; A2. of No 933
Mīzān al-maqādīr; Me1. of No 1204; Tehran (Majlis 2745/6)
Mīzān al-`ulūm fī taḥqīq al-ma`lūm; M4. of No 584
al-Mizwalat al-Shimāliyya bi Faḍli Dā'iri Ufqi Qusṭantiniyya; A17. of No 1004
K. al-mu`ādalāt; M3. of No 595
R. dar mu`addal-i qamar; A1. of No 957
R. fī mu`addil al-nahār wa'l-`amal bi-ālatihī; A2. of No 987; A1.of No 0265
Mu`allafāt Ibn Sinān; HS1. of No 174
K. al-mu`āmalāt; M1. of No 115; M3. of No 59; M1. of No 434
K. al-mu`āmalāt fi'l-ḥisāb; M25. of No 328
Mu'āmara ilā al-zīj al-majmū`a; Damascus (al-Zahiriyya 3092)
Mu'āmarāt A`māl al-Rasm fī al-Munḥarifāt bi Uṣūl Ulugh Beg; A21. of No 1323
al-R. al-mu`arraba; Patna (Bankipore 2460, 2463); London (British 761/3. – Patna 2463)
Mu`arraba sana; A2. of No 1253
K. al-mubāhasāt fi'l-asrār; A1. of No 89
al-Mubtakarāt al-ḥisābiyya; M2. of No 815
M. fī muḍī'āt al-jaww al-ḥāditha fi'l-`ulw; Mt1. of No 348
Mūḍiḥ al-adilla fī ru'yat al-ahilla; A1. of No 795
Muḍīḥ al-awqāt fī ma`rifat al-muqanṭarāt; A1. of No 858
Muḍīḥ al-awqāt fī ma`rifat al-muqanṭarāt; A1. of No 933
Mūḍiḥ fī `ilm al-ḥisāb; M1. of No 056
R. fi'l-mudhkhal ilā'l-arithmāṭīqı; M15. of No 79
K. al-mudkhil; A1. of No 1105
al-Mufaḍḍal fi'l-`amal bi-niṣf dā'irat al-mu`addil; Paris (2547/15)
al-R. al-mufaṣṣaḥa fī mā yata`allaqu bi'l-asṭiḥa; A4. of No 1367
al-R. al-mufaṣṣala fi'l-`amal bi niṣf dā'irat al-mu`addil; A8. of No 888
al-Mufaṣṣil fī al-`Amal bi Niṣf Dā'irat al-Mu`addil; A39. of No 888
Mufāwaḍāt Ibn Samaka al-Qummī baynahū wa bayna Ibn al-`Amīd; A1. of No 183
Mufīd al-ḥāsib li'l-mubtadī al-rāghib; M1. of No 925
Mufīd al-ḥesab; Tarim (Hills of Yemen Al-Husayn 79/8)
al-Mufīd fi'l-jabr wa'l-muqābala; M3. of No 0142
Mufīd al-muḥtāj fī sharḥ al-Sirāj; A1. of No 1359
al-K. al-mughnī; M3. of No 425
al-Mughnī al-jalī fi'l-ḥisāb al-hindī; M1. of No 568
al-Mughnī fī irshād al-qāṣid; A1. of No 55
al-Mughnī fi'l-nujūm; A1. of No 0269; A1. of No 627
al-R. al-Muhadhdhabiyya fi'l-ḥisāb al-hawā'ī; M2. of No 421
al-R. al-Muḥammadiyya fi'l-ḥisāb; M1. of No 845
Muḥarrara fī taṣḥīḥ al-sā`a fī ṭaraf al-jayb min al-rub`; St. Petersburg (Institute of Oriental Studies B 1411)
K. al-muḥāsib; Tbilisi (AS 575/3)
Muḥaṣṣal afkār al-mutaqaddimīn wa'l-muta'akhkhirīn min al-`ulamā wa'l-ḥukamā wa'l-mutakallimīn = al-Muḥaṣṣal min nihāyat al-`uqūl fī `ilm al-uṣūl; E3. of No 535

R. Muḥibballāh Allāhabādī; PH1. of No 967
al-K. al-muḥīṭ fi'l-ḥisāb; M10. of No 309
K. al-Muḥīṭ fī `Ilm al-Aflāk va al-Abḥur; A5. of No 977; AG1. of No 977
al-R. al-muḥīṭiyya; M3. of No 802
R. muḥṣilat al-maṭlūb fī rub` al-juyūb; Fas (Zawiya 5d.)
Mu`īn al-ṭālib `alā `amal al-asṭurlāb; A2. of No 685
al-R. al-Mu`īniyya fī `ilm al-hay'a; A9. of No 606
al-Mu`jam fī aṣḥāb al-qāḍī al-imām Abī `Alī al-Ṣadafī ibn Sukkara; HS2. of No 590
Mu`jam al-buldān; G1. of No 557
al-K. al-mūjaz al-Mawḍū`ī fi'l-ḥisāb; M2. of No 487
al-K. al-mūjaz al-mufīd fī `ilm al-ḥisāb; M1. of No 546
R. mūjaza `ala'l-āla al-musammāt bi'l-shakāziyya; Cairo (Tal`at mīqāt 103/10)
al-Mu`jizāt al-najība fī sharḥ al-risāla al-`Alā'iyya; M1. of No 720
Mujmal al-maṭlūb fi'l-`amal bi rub` al-juyūb; A10. of No 775
Mujmal min al-qawl fī hay'at al-`ālam wa khilqatihı; Princeton (Yehuda 886)
R. fi'l-mujtamal al-ta`dīl; A1. of No 0252
R. fi'l-muka`ab; M2. of No 240
K. fi'l-muka`abāt; M6. of No 219
Mukhtār al-ḥikam wa maḥāsin al-kalim; HS1. of No 364
al-Mukhtār min `ilm al-falak; Cairo (Taymur riyad. 55/2)
K. al-mukhtār fī kashf al-asrār wa hatk al-astār = K. fī `ilm al-ḥiyal; Me1. of No 617
al-K. al-mukhtār min kutub al-ikhtiyārāt al-falakiyya; A1. of No 367
al-Mukhtaṣar; M1. of No 728
Mukhtaṣar fi'l-`amal bi'l-asṭurlāb wa rub` al-muqanṭarāt wa'l-rub` al-mujayyab; A11. of No 750; Rome (Vatican 494/7)
Mukhtaṣar fi'l-`amal bi rub` al-dā'ira; A9. of No 715
Mukhtaṣar dar asṭurlāb; Tashkent (Institute for Oriental Studies 7376/2)
Mukhtaṣar al-bārī`; Damascus (al-Zahiriyya 3112)
Mukhtaṣar dar bayān-i āthār-i `ulwı; Mt1. of No 1388
Mukhtaṣar fī bayān maqālāt fi'l-`ālam; A2. of No 1090
Mukhtaṣar fī bayān al-rasad; A6. of No 938
Mukhtaṣar fī dhhikr al-a`māl allatī yaḥtāj ilayhā al-ḥisāb; Oxford (Bodleian I 1037/1)
K. mukhtaṣar al-duwal; H1. of No 633
Mukhtaṣar fī fann al-futūḥ min al-ḥisāb; Paris (2330/10)
Mukhtaṣar R. al-fawā'id al-muhimma fī ma`rifat mā yuḥtāju min al-jayb bi'l-ḍarb wa'l-qisma; M1. of No 0236
al-Mukhtaṣar fi'l-hay'a; Aligarh (Azad Sulayman 161/21)
Mukhtaṣār (fī')(al-)ḥisāb; M1. of No 548; Baku (Institute of Manuscripts A 739/1); Istanbul (Süleymaniye Ismi khan 295/2, 296)
Mukhtaṣar fī ḥisāb al-ḍarb al-qismānī; M1. of No 0245
al-K. al-mukhtaṣar fī ḥisāb al-jabr wa'l-muqābala; M3. of No 41
Mukhtaṣar fī ḥisāb al-jumal; M3. of No 1026
Mukhtaṣar fi'l-ḥisāb wa'l-misāḥa; M8. of No 309
Mukhtaṣar-i `ilm-i asṭurlāb; A1. of No 01
Mukhtaṣar dar `ilm-i hay`at; A14. of No 802
Mukhtaṣar fī `ilm al-hay'a; A9. of No 317; A1. of No 597
Mukhtaṣar (fī) `ilm al-ḥisāb; M1.of No 1006; M5. of No 976; Mahachqala (Institute of History, Language, and Literature 1923); Jerusalem (National and University 68)
Mukhtaṣar fī `ilm al-ḥisāb wa'l-handasa; Istanbul (Millet, Ali Emiri 362)
Mukhtaṣar fī `ilm al-jabr wa'l-muqābala; M1. of No 1256
Mukhtaṣar fī `ilm al-maftūḥ al-hawā'ī; M2. of No 783
Mukhtaṣar fī `ilm al-nafs al-insāniyya; PH1. of No 633
Mukhtaṣar fī `ilm al-nujūm; A29. of No 103
Mukhtaṣar fī `ilm al-tanjīm wa ma`rifat al-taqwīm; A17. of No 606
Mukhtaṣar dar `ilm-i ḥisāb; M2. of No 832
Mukhtaṣar dar `ilm-i nujūm; A13. of No 88
Mukhtaṣar-i Irshād; A2. of No 736
Mukhtaṣar fi'l-irshād ilā wafq al-a`dād; Istanbul (Süleymaniye AS 4801, ff. 114-121)
Mukhtaṣar fī isti`māl al-asṭurlāb; A1. of No 589
Mukhtaṣar kāfī li'l-muṭallib; M7. of No 696
Mukhtaṣar fī kifāyat al-`amal bi'l-kura; Istanbul (Süleymaniye AS 2673/2)
Mukhtaṣar kitāb al-Arithmāṭiqī; M2. of No 317
Mukhtaṣar kitāb Uqlīdis; M1. of No 114; M1. of No 599
Mukhtaṣar al-Majisṭı; A1. of No 1141; A1. of No 317; A1. of No 410; A2. of No 512
Mukhtaṣār (dar) (fī) ma`rifat(-i) (al-)asṭurlāb; St. Petersburg (Institute of Oriental B 3051); Hyderabad (Nizamiyya Tibbiyya College 2290.); St. Petersburg (Institute of Oriental Studies A 265/6); St. Petersburg (National 317/1); St. Petersburg (National 317/1); Baghdad (Waqfs Sup. 330)
Mukhtaṣar dar ma`rifat-i `amal bā rub`-i shikāzī; A9. of No 940
Mukhtaṣar dar ma`rifat-i asṭurlāb-i musarṭān; A1. of No 219

Mukhtaṣar dar ma`rifat-i istikhrāj-i taqāwim-i kawākib; Rampur (Rada 1185b)
Mukhtaṣar dar ma`rifat-i kura; Berlin (State Pers. 326/3)
Mukhtaṣar fī ma`rifat al-nagham; Manisa (Public 1705/10)
Mukhtaṣar fī ma`rifat al-taqwīm; Kazimiyya (Husayn Mahfuz 235)
Mukhtaṣar dar ma`rifat(-i) (al-)taqwīm; A1. of No 0223; A1. of No 915; Kazan (University 14, 15); St. Petersburg (National 317/5.); A2. of No 817
al-Mukhtaṣar al-ma`rūf Bīst bāb fi'l-asṭurlāb; Jerusalem (National and University, Yehuda 334/1)
Mukhtaṣar fi'l-misāḥa; M1. of No 246; M1. of No 710
Mukhtaṣar al-murshida fī ṣinā`at al-ghubār; Damascus (al-Zahiriyya 3089)
Mukhtaṣar muṣādarāt Uqlīdis; M2. of No 599
Mukhtaṣar mushtamil bi'l-misāḥa; M1. of No 824
Mukhtaṣar fi'l-qirānāt; A1. 0243
Mukhtaṣar fi'l-rub` al-muqanṭar; Baghdad (Ya`qub Sarkis 120/3)
Mukhtaṣar dar ṣan`at-i asṭurlāb; A2. of No 972; Tashkent (Institute for Oriental Studies 1206/6, 3780/2)
Mukhtaṣar Silk al-durrayn fī ḥall al-nayyirayn; A1 of No 1006
Mukhtaṣar fi'l-ṭabī`iyāt; Ph1. of No 420
Mukhtaṣar Talkhīṣ Ibn al-Bannā; M17. of No 783
Mukhtaṣar dar taqwīm; Hyderabad (Sa`idiyya Hay'a 18)
Mukhtaṣar Ta`rīf al-ṣubra kaylan wa waznan; Oxford (Bodleian I 986/1)
Mukhtaṣar Ta'rīkh al-bashar; H1. of No 680
Mukhtaṣar fī tarkīb al-ḥurūf al-ma`rūf bi'l-sīmiyā wa tartībihā `alā'l-asmā' wa'l-aflāk wa'l-amlāk wa'l-burūj; A3. of No 415
Mukhtaṣar Thābit ibn Qurra li-kitāb Jālīnus fi'l-mawlūdīn li-sab`a ashhur; ME2. of No 103
Mukhtaṣar Tuḥfat al-aḥbab fī `ilm al-ḥisāb; M13. of No 873
Mukhtaṣar Uqlīdis; M1. of No 317; Tashkent (Institute for Oriental Studies 3373/4)
Mukhtaṣar wajīz (talkhīṣ) fī `ilm al-ḥisāb al-maftūḥ al-hawā'ı; M23. of No 783
Mukhtaṣar al-Wasīla fi'l-ḥisāb; M1. of No 0141
Mukhtaṣar min al-Zīj al-jadīd al-mansūb ilā al-sulṭān Ulugh Beg; Berlin ((IGMN)II. 38)
R. mukhtaṣara fi'l-`amal bi rub` al-dā'ira al-mawḍū` `alayhi al-muqanṭarāt al-maṭwiyya; A3. of No 903; A5. of No 903
R. mukhtaṣara fi'l-`amal bi thumn al-dā'ira al-mawḍū` `alayhi al-muqanṭarāt; A1. of No 1221
R. mukhtaṣara fi'l-`amal bi'l-rub` al-mujayyab; A19. of No 842; A6. of No 842
R. mukhtaṣara fi'l-`amal bi'-l-rub` al-tāmm; A18. of No 750
M. mukhtaṣara fi'l-ashkāl al-hilāliyya; M9. of No 328
M. mukhtaṣara fī birkār al-Dawā'ir al-`iẓām; M20. of No 328
R. mukhtaṣara fi'l-ḥisāb; M1. of No 547
al-Mukhtaṣara fi'l-jayb; A1. of No 750
R. mukhtaṣara `ala al-jayb al-ghayib; A2. of No 1221
R. mukhtaṣara fī kayfiyyat al-`amal bi'l-ṣafīḥa al-jāmi`a; Cairo (Taymur riyad. 131/3)
R. mukhtaṣara fī ma`rifat al-`amal bi'l-rub` al-maqṭū` al-shimālī; London (British Sup. 2437/1, 3693/2)
R. mukhtaṣara fī ma`rifat al-a`dād bi'l-aṣābi`; Cairo (`Aqaid 3964/6)
R. mukhtaṣara fi'l-āla musammāt bi'l-rub` al-muthallath aw al-jayb al-tāmm; Cairo (Falak 17289/2)
R. mukhtaṣara `alā'l-rub` al-mujayyab; London (British Sup. 2437/2, 3693/3)
R.-yi mukhtaṣara `alā rub`ay al-kāmil wa'l-maqṭū`al-mawḍū`a `alayhimā al-muqanṭarāt; A3. of No 955
M. mukhtaṣara fī samt al-Qibla; A25. of No 328
Mukhtaṣarī dar bayān-i dawā'ir-i `iẓām; M1. of No 971
Mukhtaṣarī dar `ilm-i hay'at-ı ajrām-ı `ulwī wa suflī; A1. of No 0198
R. fi'l-mukhula li-ma`rifat awqāt al-ṣayḥa; A1. of No 478
Mulakhkhaṣ al-albāb fi'l-`amal bi'l-asṭurlāb; A1. of No 693
al-Mulakhkhaṣ fi'l-hay`a; A1. of No 547
Mulakhkhaṣ al-ḥisāb; M1. of No 0275
Mulakhkhhaṣ Miftāḥ [al-ḥisāb li Ghiyāth al-Kāshī; Tashkent (Institute for Oriental Studies 2245/8)
Mulakhkhaṣ Taḥrīr Uqlīdis; M1. of No 1110
R. mulakhkhaṣa fi'l-`amal bi'l-rub` al-mujayyab; A9. of No 775
K. al-Mulḥama; Calcutta (Asiatic Society of Bengal 1506)
al-Mulḥamāt al-Marwiyya `an al-shuhūr al-rūmiyya; A18. of No 88
Multaqaṭ al-durar wa'l-yawāqīt fī istikhrāj a`māl al-mawāqīt; A3. of No 1341
al-Mumti` fī sharḥ al-Muqni`; A1. of No 1295
al-Mumti` fī sharḥ al-muqni` fi'l-jabr wa'l-muqābala; M10. of No 783
R. fi'l-munfarija taṣīru ḥādda qabla an taṣīra qā'ima; M2. of No 858
K. al-munfaṣilāt wa'l-mutawassiṭāt; M2. of No 48
Mu'nis al-fuḍalā; M1. of No 459
K. al-Mu'nis fī nuzhat-i ahl-i majlis; Rampur (Rada 2323)
Munqidh al-hālik wa `umdat al-sālik; M1.of No 528

al-Munqidh min al-ḍalāl wa'l-mufṣiḥ an al-ahwal; PH3. of No 415
Muntahā al-idrāk fī jalāl al-aflāk; A6. of No 194
Muntahā al-idrāk fī taqāsīm al-aflāk; A1. of No 469
Muntakhab; M2. of No 1178
Muntakhab al-Ghāfiqī fi'l-adwiya al-mufrada; ME1. of No 633
Muntakhab-i Ḥall-i taqwīm = R.-yi intikhāb; A6. of No 972
Muntakhab al-hay'a; A1. of No 896
Muntakhab al-ḥisāb; M1. of No 1135
Muntakhab al-Khulāṣa al-Bahā'iyya; M2. of No 1058
Muntakhab-i kunh al-murād fī wafq al-a`dād; Tehran (Mahdawi 281/14)
Muntakhab fi ma`rifat al-Hilāl wa Dhikr al-Shuhūr al-`Arabiyya; A3. of No 1096
Muntakhab kitāb-i Uqlīdis; M1. of No 1180
Muntakhab-i Zīj-i jadīd-i Guragānī; Tehran (University 950/2)
Munyat al-muwaqqitīn wa tuḥfat al-mutafakkirīn; Cairo (Lughat 4368)
Munyat al-ṭullāb fī taḥṣīl ghālib al-qawā`id al-falakiyya bi'l-ḥisāb; A24. of No 888
Muqaddamat `amal al-basīṭa al-musammāt bi'l-rukhāma bi-ṭarīq al-handasa li-tashīl `amalihā fi'l-jāmi` wa'l-madrasa; Berlin (State5868)
Dar muqaddamāt-i ikhtiyārāt bar sayāragan-i sab`a; A3. of No 301
Muqaddamāt li tabyīn al-muṣādara fi'l-maqāla al-ūlā li-Uqlīdis = Muqaddamāt li tabyīn al-muṣādara allatī dhakarahā Uqlīd[is] fī ṣadr al-maqāla al-ūlā fīmā ya`tallaqu bi'l-khuṭuṭ al-mutawāziyya; M1. of No 593
Muqaddamāt yajibu dhikruhā fī amr khawāṣṣ al-wafq wa manfa` atihī; Berlin ((IGMN)III. 2)
Muqaddima; A10. of No 317; H2. of No 771
Muqaddima fī `amal al-munāsakhāt bi'l-jadwal = Faṣl fī `illat al-munāsakhāt bi'l-jadwal; M20. of No 783
al-Muqaddima al-durriyya fī istinbāṭ al-ṣinā`a al-jabriyya; M1. of No 758
Muqaddima fi'l-fuṣūl al-arba`a wa awqāt al-ṣalawāt wa ākhir al-layl wa jihat al-Qibla bi ghayr āla; A3. of No 1134
Muqaddima fi'l-handasa; M2. of No 296
Muqaddima fi'l-ḥisāb li-`āmmat aḥdāth al-kuttāb; M1. of No 604
Muqaddima fī ḥisāb al-masā'il al-jaybiyya wa'l-a`māl al-falakiyya; A6. of No 873
Muqaddima `alā ikhtiṣār al-kusūr fī jadāwil qismat al-tarikāt; M2. of No 1160
Muqaddima fī `ilm al-falak; Leipzig (814/3)
Muqaddima fī `ilm al-falak yu`rafu minhā awā'il al-layl wa'l-nahār; A3. of No 1008
al-Muqaddima fī `ilm al-ḥisāb; M23. of No 873
Muqaddima fī `ilm al-jabr wa'l-muqābala; (Vienna 1507/4)
Muqaddima fī `ilm al-mīqāt; A1. of No 796
Muqaddima fī `ilm al-tasṭīḥ; Baku (Institute of Manuscripts B 2553/3)
al-Muqaddima al-kāfiyya fī `ilm al-tasṭīḥ; Jerusalem (National and University Yehuda 334/2)
al-Muqaddima al-kāfiyya fī uṣūl al-jabr wa'l-muqābala wa mā yu`rafu bihi qiyāsuhu min al-amthila; M1. of No 267
Muqaddima b. Ma`rifa Iṣlāḥ Qirā'at al-Taqwīm; A2. of No 884
Muqaddima fī ma`rifat al-ayyām wa'l-shuhūr `alā madd al-sinīn wa'l-duhūr; A4. of No 1008
Muqaddima fī ma`rifat al-ḥudūd; A48. of No 873
Muqaddima fī Ma`rifat taqwīm al-Kawākib al-Sayyāra bi'l-Raṣad al-Jadīd al-Samarkandī li Ṭūl "adna" ; A7. of No 1341
Muqaddima fī ma`rifat al-ṭulū` wa'l-ghurūb fi'l-burūj wa'l-manāzil wa'l-kawā [kib] ; Leipzig (820/3)
Muqaddima fi'l-misāḥa; M1. of No 423
Muqaddima mukhtaṣara fī ma`rifat a`māl al-layl wa'l-nahar [min rub` al-dā'ira al-musammāt] bi'l-rub` al-mujayyab; A3. of No 1006
Muqaddima mukhtaṣara fī ma`rifat al-kawākib al-thābita wa ṣuwariha; Princeton (Yehuda 373)
Muqaddima mukhtaṣara yu`rafu minhā al-fuṣūl al-arba`a wa awqāt al-ṣalāt wa ajzā` al-layl wa jihat al-Qibla bi ghayr āla = Muqaddima = R. fi'l-fuṣūl al-arba`a wa awqāt al-ṣalāt wa ajzā` al-layl wa jihat al-Qibla bi ghayr āla; A2. of No 1008
Muqaddima nāfi`a fī `ilm al-ḥisāb; Paris (2330/12)
Muqaddima li-ṣinā`at āla tu`raf bihā al-ab`ād; M1. of No 297
Muqaddima fī taṣḥīḥ burhān al-shakl al-rābi` min tāsi`at al-Majisṭī; A4. of No 629
Muqaddima tata`allaqu bi ḥarakāt al-kawākib; A4. of No 635
Muqaddima li Uqlīdis; M12. of No 696
Muqaddima fī uṣūl al-handasa; M1. of No 881
Muqaddima `alā waḍ` al-basīṭa al-musammāt bi'l-rukhāma bi ṭarīq al-handasa = M. `alā `amal al-basīṭa al-musammāt bi'l-rukhāma bi ṭarīq al-handasa; A5. of No 888
Muqaddima `alā Zād al-musāfir li Ibn al-Majdī; A3. of No 1160
Muqaddima `alā'l-rub` al-shimālī al-kāmil; A27. of No 873
Muqaddimat al-hisāb; Kazan (University 2085)
Muqaddimāt fī `ilm al-ḥisāb; M22. of No 103; M1. of No 697
Fī muqaddimāt kitāb al-Makhrūṭāt; M12. of No 606

Muqaddimāt sab` yuḥtāju ilayhā fī ma`rifat qaws quzaḥ; St. Petersburg (Institute of Oriental Studies B 635)
Muqaddimat al-Taqwīm; A1. of No 1273
R. al-muqanṭara; A13. of No 990
R.-i Muqanṭarā;. A29. of No 990; A31. of No 990; A2. of No 975
R. al-muqanṭarāt bi'l-Turkī; Berlin ((IGMN)II. 13)
al-Muqanṭarāt; Hyderabad (Osmania University 520/M)
R. fī muqanṭarāt khaṭṭ al-istiwā'; A1. of No 761
al-Muqarrab fī waṣf al-jayb; A4. of No 1027
Muqarrab fī waṣf al-mujayyab; Paris (6105)
R. fī'l-muqanṭarāt wa ṣafā'iḥ al-asṭurlāb; Tashkent (Institute for Oriental Studies 467/2)
Muqarrib al-maṭālib fī ta`dīl al-kawākib; A1. of No 904
al-Muqni` fī'l-ḥisāb al-hindī; M3. of No 341
al-Muqni` fī `ilm al-Muqri`; A1. of No 1166
al-Muqni` fī'l-jabr wa'l-muqābala; M9. of No 783
al-Muqni`a kāmila fī `ilm al-jabr wa'l-muqābala; Princeton (Garr. 1053)
Muqni` al-labīb fī ma`rifat al-tarākīb; M1. of No 0242
al-K. al-muqni` fī'l-misāḥa; M17. of No 309; M9. of No 309
al-Muqtaṭafāt al-fikriyya `ala'l-dā'ira al-ta'rīkhiyya; A3. of No 1253
al-Muqti` (al-Mumti`) fī sharḥ al-Muqni`; A4. of No 1166
Murāsala dar `ilm-i ṭabī`iyyāt; Ph1. of No 0156
Muriḥ al-'Anī fī al-`Amal bi al-Zīj al-Khāqānī; A3. of No 1016
K. al-Murshida, al-Fuṣūl; ME3. of No 142
al-Murshid li-dhawī al-albāb fī `ilm al-ḥisāb; M1. of No 0212
Murshid al-kifāya; PH15. of No 317
Murshid al-muḥāsibīn; M1. of No 662
al-Murshida fī ṣinā`at al-ghubār; M2. of No 878
Murshidat al-ṭālib ilā asnā al-maṭālib = al-Murshida fī ṣinā`at al-ghubār; M5. of No 783
al-R. al-Murshidiyya; A4. of No 1096
Murūj al-dhahab wa ma`ādin al-jawāhir; E1. of No 186
R. fī'l-mushkil min amr al-nisba = K. al-nisba; M1.of No 82
Mushkil gushā-yi ḥisāb u mu`dil numā-yi kitāb = Mukhtaṣar fī' l-ḥisāb; M2. of No 821
Mushkilāt al-ḥisāb; M4. of No 420
Mushkilāt fī `ilm al-ḥisab; Baku (Institute of Manuscripts B 5545/14)
R. mushtamala `alā'l-ḥisāb wa'l-jabr wa'l-muqābala; M8. of No 749
R.-yi mushtamil dar ma`rifat-i asṭurlāb-i shimālī; Oxford (Bodleian I 1037/2)
K. mushtamil `alā rasāil fī'l-`amal bi'l-rub` al-hilālī; Damascus (al-Zahiriyya 3098)
al-R. al-mushtamila `alā'l-ḥisāb wa'l-jabr wa'l-muqābala; M1. of No 0170
(R.)(K.) fī'l-mūsīqā; Mu1. of No 606; Mu1. of No 226; Mu1. of No 121; Mu1. of No 431
K. al-mūsīqā al-kabīr; Mu1. of No 180
K. al-mūsīqā al-kabīr maqālatān; Mu2. of No 100
K. al-mūsīqā al-ṣaghīr; Mu3. of No 100
R.-yi mūsīqī; Mu1. of No 1128; and Mu1. of No 882
al-Musri` mukhtaṣar al-Mumti` wa sharhuhu fī'l- jabr wa'l-muqābala; M11. of No 783
M. mustaqsāt fī'l-ashkāl al-hilāliyya; M8. of No 328
al-Mu`tabar fī'l-ḥikma; E1. of No 485
K. al-muṭālib fī `ilm al-mashāriq wa'l-maghārib; (Munich 876)
R. muta`allaqa risāla Mu`īniyya = Dhayl-i risāla-yi Mu`īniyya; A19. of No 606
R. muta`alliqa bi'l-ḥisāb; Kazan (University 1040)
K. ilā al-Mu`taṣim billāh fī'l-falsafa al-ūla; PH1. of No 79
K. al-mu`ṭayāt; M9. of No 79
K. al-mu`ṭayāt fī'l-handasa li Uqlīdis; M2. of No 114
(K.) (fī)('l-)muthallathāt; M1. of No 131; M55. of No 296
K. al-muthallath al-qā'im al-zāwiya; M14. of No 487
Fī muthallathāt zāwiya qā'ima; Paris (2457/19)
Muwaḍḍiḥa fī ḥisāb al-judhūr al-ṣumm; M1. of No 287
Muwaḍḍiḥa dar ḥisāb-i rāsim; M2. of No 287
al-R. al-Muẓaffariyya fī'l-`amal [al-āla] al-musammāt bi'l-ṣafīḥa al-jawzahariyya; A7. of No 608
Muzīlat jahl al-jahala bi miqdār mā fī al-muthamman al-kullī min mas`ari al-mas'ala; Me3. of No 1253

-N-

Naba' al-nāẓir fī'l-marāyā wa'l-manāẓir; Ph1. of No731
K. al-nabāt; B1. of No 436; B1. of No 97
R. fī'l-nabḍ; ME2. of No 317
Naḍra al-lubāb fī sharḥ Bahja al-albāb; A1. of No1336
al-Naf` al-`āmm fī `amal bi'l-rub` al-tāmm li mawāqīt al-Islām = R. fī'l-rub` al-tāmm li mawāqīt al-Islām; A14. of No 750
Nafā'is al-durar fī ma`rifat al-waqt bi'l-qamar; A22. of No 842
Nafā'is al-funūn fī `arā'is al-`uyūn; E1.of No 719
Nafḥ al-fuyūḥ fī sharḥ Rayḥāna al-rūḥ; A3. of No 1046
K. nafḥ al-ṭīb min ghuṣn al-Andalus al-raṭīb wa dhikr wazīrihā Lisān al-Dīn al-Khaṭīb; H1. of No 1099

Nafhat al-misk al-khitām wa manḥā al-mutanassik min al-anām; A2. of No 1075
al-Nāfi'a (al-Nāqiya) 'alā al-āla al-jāmi'a; A8. of No 1176
al-Naffaḥa al-zakiyya fi'l-'amal bi'l-jiha al-jaybiyya; A1 of No 1379
al-Nafhat al-nadiyya fi ṭawāli' ayyām al-shuhur al-'arabiyya wa'l-rumiyya wa'l-farisiyya; A1. of No 1411
al-Nafḥa al-miskiyya fi'l-mas'ala al-Makkiyya; A2. of No 1340
Fi'l-nafs; PH2. of No 436
Nahj al-bulugh fi Zij Ulugh; A1. of No 1383
K. al-najāt; E2. of No 317
Najm al-Ṣadr; A1. of No 1266
Nakhab al-albāb fi'l-'amal bi'l-asṭurlāb = R. fi'l-'amal bi'l-asṭurlāb; A2. of No 715
M. fi naql khawāṣṣ al-shakl al-qaṭṭā ' ilā mā yughni 'anhu; M17. of No 348
al-Nasama al-nafḥiyya; A2. of No 1031
al-Nasamāt al-fayḥiyya 'ala'l-R. al-Fatḥiyya; A8. of No 1367
Naṣb al-muta'allimin; Tashkent (Institute for Oriental Studies 8154)
K. naṣb al-sharak li iqtināṣ mā tashtadd ilayhi al-ḥāja min 'ilm al-falak; A1. of No 850
Nāshiyyat al-layl; A4. of No 1046
Nashq al-azhār fi 'ajā'ib (gharā'ib) al-aqṭār; AG1. of No 937
al-Nashr al'Atır fi Ḥall Zij Ibn al-Shāṭır;. A3. of No 1380
R. al-nashr al-muṭayyab fi'l-'amal bi'l-rub' al-mujayyab; A2. of No 795
R.-yi Naṣiriyya; A13. of No 606
Natā'ij al-fikr fi'l-mubāshara bi'l-qamar; A17 of No 888
Natā'ij al-funun wa maḥāsin al-mutun; E1. of No 1043
Natā'ij al-ḥaqā'iq; A8. of No 802
Natija al-afkār fi a'māl al-layl wa'l-nahār; A16. of No 842
Natija falakiyya wa a'māl dāirat al-'l-sana al-shamsiyya; Baghdad (Ya'qub Sarkis 119/4)
Natijat al-afkār fi 'amal al-layl wa'l-nahār; A1. of No 1028
Natijat al-afkār fi 'amal al-layl wa'l-nahār = Bughyat al-nafs fi ḥall al-shams; A1. of No 1052
Natijat al-afkār fi 'amal al-layl wa'l-nahār; A1. of No 446
Natijat al-afkār fi a'māl al-layl wa'l-nahār; A1. of No 1243
Natijat al-afkār fi'l-'amal bi-jayb al-awṭār = Iṣlāḥ al-risāla al-Fatḥiyya; Princeton (Yehuda 4464)
Natijat al-tawqi'āt wa ḥiṣaṣ al-awqāt li 'arḍ 30 martaba 'alā'l-ayyām al-mashhura al-qib-ṭiyya; A2. of No 1212
Natijat al-afkār fi'l-'amal bi-jayb wa'l-awṭār; Cairo (Miqāt 138/14)
al-Natija al-kubrā; A17. of No 842
K. nawādir al-ashkāl; M15. of No 309
Nawādir al-misāḥa; M9. of No231
Nawādir al-qaḍā '; A1. of No 50
Nawādir al-ṭibb; ME1. of No 65
Nawruziyya; A1. of No 1240
Nawruz-nāma; A1. of No 1262; A1. of No 420; A2. of No 148
K. nawādir al-ḥisāb wa khawāṣṣ al-a'dād; M4. of No 59
K. al-nawādir al-jabr; M3. of No 97
R. dar nawruz; A1. of No 1162
R. nawruziyya; A7. of No 1160; PH12. of No 317
Nayl al-ibtihāj bi taṭriz al-Dibāj = Dhayl (Takmilat) al-Dibāj li Ibn Farḥun; HS1. of No 1091
Nayl al-maṭlub fi'l-'amal bi rub' al-juyub; A2. of No 831
Naẓm 'ilm al-falak; A1. of No 0189
Naẓm al-'iqyān fi a'yān al-a'yān; H1. of No 896
Naẓm al-'uqud fi 'amal al-sā'āt 'alā'l-'amud; A9. of No 842
Naẓm al-durar fi taqwim al-shams wa'l-qamar; A5. of No 1042
Naẓm al-durr al-manthur fi 'amal al-munāsakhat bi'l-ṣaḥiḥ wa'l-kusur; M1. of No 955
Naẓm al-ḥisāb; M1. of No 0251
Naẓm al-jawāhir min al-Durr al-fākhir; Cairo (Miqāt 185/1)
Naẓm al-jawāhir wa'l-yawāqit fi taḥrir a'māl al-mawāqit; A2. of No 1012
Naẓm al-jawāhir wa'l-yawāqit fi taḥrir a'māl al-mawāqit; A7. of No 1018
Naẓm al-la'āli' fi'l-'amal bi'l-rub' al-hilālī; Cairo (Miqāt 138/10)
Naẓm al-laāli fi'l-'amal bi'l-rub' al-shimāli; A29. of No 873
Naẓm al-lu'lu' al-muhadhdhab fi'l-'amal bi'l-rub' al-mujayyab; A4. of No 715
Naẓm al-muthallathā;t M1. of No 075
Naẓm al-yawāqit al-ghawāl fi ma'rifat 'amal al-hilāl; A3. of No 1214
Naẓm fi 'ilm al-falak; A1.of No 0174
Naẓm fi rub' al-mujayyab; A5. of No 1166
Nihāya al-bayān fi ma'rifat maqādir al-zamān; A1. of No 059
Nihāya al-su'l fi taṣḥiḥ al-uṣul; A4. of No 750
Nihāyat al-idrāk fi asrār 'ulum al-aflāk; A1.of No 608

Nihāyat al-idrāk fī dirāya al-aflāk = Muntahā al-idrāk fī'l-hay'a; AG1. of No 936
Nihāyat al-idrāk fī dirāyat al-aflāk; AG1. of No 668
K. nihāyat al-iqdām fī `ilm al-kalām; PH1. of No 461
Nihāyat al-musāmara fī'l-`amal bi'l-musātara; Cairo (Kavala mīqāt 2/4)
Nihāyat al-musāmara fī'l-`amal bi'l-musātara; A4. of No 695
Nihāyat al-Rutba fī al-`Amal bi Jadwal al-Nisba; A40. of No 888
Nihāyat al-rutba fī'l-`amal bi jadāwil al-nisba al-sittīniyya; M4. of No 873
Nihāyat al-rutba fī'l-`amal bi jadwal al-nisba al-sittīniyya; M1. of No 954
Nihāyat al-tashīl li'l-`ibāra wa'l-ikhtiṣār li'l-ghāya li taqwīm al-kawākib al-sayyāra; A1. of No 1247
Nihāyat al-ṭullāb fī `ilm al-ḥisāb; M1. of No 892
Nihayat al-rutba fi'l-'amal al-nisba al-sittiniyya; A26. of No 888
M. fī'l-nisab allatī bayna al-filizzāt wa'l-jawāhir fī'l-ḥajm wa'l-wazn; Me1. of No 348
Niṣāb al-jabr wa'l-muqābala; M25. of No 873
Niṣāb al-ḥabr fī ḥisāb al-jabr; M3. of No 584
K. al-nisab al-muta-shakkala fī'l-jabr wa'l-muqābala; M1. of No 1004
M. fī nisab al-qisiy al-zamāniyya ilā irtifā`iha; A27. of No 328
R. fī'l-nisab al-zamāniyya; A22. of No 79
R. fī'l-nisab wa'l-ta`rīfāt; M7. of No 256
Nisba mu'allafa; Tehran (University 957/2)
K. al-nisba al-sittīniyya; Oxford (Bodleian Pers. I 77/4 = 1552/4)
K. al-nisba al-sittīniyya al-kubrā; M1. of No 880
R. al-nisba al-sittīniyya fī ḥisāb `ilm mīqāt; Berlin ((IGMN)II. 2)
(K.)(R.) fī'l-nisba wa'l-tanāsub; M1. of No 80; M1. of No 119
al-Nisba al-sittīniyya al-musta`mala fī'l-a`māl al-falakiyya; (Munich 865)
al-Nisba al-sittīniyya fī ḥisāb al-a`māl al-falakiyya; Hyderabad (Salar Jung Hay'a 30)
al-Nisba wa'l-kafā'āt fī qism al-tarikāt; M1. of No 1343
Fī nisbat mā yaqa`u bayna thalāthat khuṭuṭ min khaṭṭ wāḥid; M23. of No 277
R. dar nisbat-i irtifā` a`ẓam al-jibal ilā quṭr al-arḍ; M8. of No 1058
K. nisbat al-sittīn; M8. of No 225
Nubdha fī'l-`amal bi daqā'iq ikhtilāf al-āfāq al-mar'iyya wa hiyya allatī ḥasabahā `Alā al-Dīn ibn al-Shāṭir; A25. of No 842
Nudhba fī'l-`amal bi rub` l-muqanṭarāt; A2. of No 1046
Nubdha fī'l-`amal bi jadwal al-nisba al-sittīniyya; A2. of No 829
Nubdha min al-handasa fī'l-zawāyā al-mutajānisa wa'l-mutaqābila al-mutasāwiyya wa'l-mutabādila; St. Petersburg (Institute of Oriental B 2833)
Nubdha min al-haqā'iq wa zubda min al-daqā'iq; A1. of No 1090
Nubdha fī `ilm al-mīqāt wa'l-muqanṭarāt; Leipzig (819)
Nubdha fī `ilm al-misāḥa; M1. of No 0282
Nubdhat al-is`āf fī ma`rifat qaws al-khilāf; A23. of No 888
Nubdha kāfiyya fī ilm al-mīqāt; Princeton (Yehuda 4103)
Nubdha min al-kalām al-muta`alliq bi'l-nujūmāt; St. Petersburg (Institute of Oriental B 3519)
al-Nubdha al-lāmi`a fīmā yata`allaq bi'l-ṣafīḥa al-jāmi`a; Fas (Zawiya 5i)
Nubdha mufīda fī ma`rifat istikhrāj al-dā'ir wa faḍlihī wa ta`dīlihimā wa ta`dīl al-irtifā`; A9. of No 1323
Nubdha mukhtaṣara min `ilm al-falak wa ma`rifat ḥulūl al-shams wa'l-qamar fī'l-manāzil; A1. of No 0124
al-Nubdha fī sharḥ al-Nuzha; M1. of No 823
al-Nubdha al-wāfiyya fī sharḥ al-Muqaddima al-Sakhāwiyya; M1. of No 1261
al-Nubdha al-wafiya fī waḍ` al-awfāq al-`adadiyya; M3. of No 1074
Nubdha fī mā yata`allaqu bi-ruy'at al-hilāl; A1. of No 99
(K.)(R.)(-yi)(dar) (fī'l-) nujūm; London (British Pers. 6315.); A4. of No 169; A7. of No 79; Istanbul (Köprülü 346.); A1. of No 0272; A1. of No 0168; A1. of No 1204; A1. of No 1271; A5. of No 1080; (Millet, Ali Emiri 357); Istanbul (Süleymaniye Fatih 3424, 3425); Kazimiya (Husayn Mahfuz 42.); Tehran (University 930)
K. fī'l-nujūm wa'l-kawākib; Kazimiya (Husayn Mahfuz 43)
Nujūm-i `ilmī wa `amalī wa aḥkām-i ḍamīr wa masā'il-i asṭurlāb; A1. of No 1020
al-Nujūm al-shāriqāt fī dhikr ba`ḍ al-ṣanā'i` al-muḥtāj ilayhā fī `ilm al-mīqāt; A1. of No 1017
al-Nujūm al-shāriqāt fī'l-`amal bi rub` al-muqanṭarāt; A8. of No 1042
al-Nujūm al-zāhirāt fī'l-`amal bi rub` al-muqanṭarāt; A1. of No 842
al-Nujūm al-zāhirāt fī'l-`amal bi rub` al-muqanṭarāt; A21. of No 873
al-Nujūm al-ẓāhira fī `amal al-jayb bi ghayr murī` wa lā dā'ira; A11. of No 764
Nujūmiyya; A3. of No 608
R.-yi nujūmiyya; A1. of No 975
al-Nukat al-zāhirāt; A5. of No 856

Nukhba al-dahr fi `aja'ib al-barr wa'l-bahr; AG1. of No 691
Nukhbat al-lubāb bi-sharḥ `amal al-asṭurlāb; (Vienna 1364/2)
Nukhbat al-mīqāt fi ma`rifat al-Qibla wa'l-awqāt; Baku (Institute of Manuscripts B 6077)
Nukhbat al-ṭullāb fi `amal al-asṭurlāb; A1. of No 1207
Nukhbat al-Tuffāḥa; M1. of No 1340
Nukhbat al-zamān fi ṣinā`at āl-qabbān; Me1. of No 1036
Nūr al-aḥdāq bi-ma`rifat `amal al-aflāk fi sā'ir al-āfāq; A1. of No 812
Nūr al-aḥdhāq; A5. of No 847
Nūr al-aḥdhāq; A7. of No 1008
Nūr al-baṣar fi'l-`amal bi'l-qamar; A8. of No 856
Nūr al-dalāla fi'l-jabr wa'l-muqābala; M1. of No 620
K. nūr ḥadīqat al-abṣār wa nawr ḥadīqat al-anẓār; Ph1. of No 1004
al-Nuqāya; E1. of No 896
al-Nuqāya Mukhtaṣar al-Wiqāya; E3. of No 706
Nuskha dar `ilm-i hay'at; A1. of No 1070
Nuzdah bāb; A1. of No 067
al-Nuzha al-naḍḍāra bi'l-kawākib al-sayyāra; A2. of No 813
K. al-nuzha al-`Alā'iyya; MA1.of No 714
Nuzhat (`Umdat) al-ṭullāb fi ma`rifat al-ḥisāb; M1. of No 842
Nuzhat al-`āmil fi'l-`amal bi'l-rub` al-kāmil; A1. of No 0204
Nuzhat al-abṣār fi a`māl al-layl wa'l-nahār; A1. of No 945
Nuzhat al-Afkār fi `Amal al-Layl wa al-Nahār; A17. of No 1017
Nuzhat al-afkār fi ma`rifat aḥwāl al-as`ār; M1. of No 884
Nuzhat al-anẓār fi Rawḍat al-azhār; A1. of No 1301
Nuzhat al-khāṭir fi waḍ` ḥudūd `alā Zād al-musāfir; A4. of No 1017
Nuzhat al-mu'allāk fi hay'at al-aflāk; A1. of No 805
Nuzhat al-mufakkir al-sāhir; Mu4. of No 100
Nuzhat al-nāẓir fi Ikhtiṣār Zīj Ibn al-Shāṭir; A1. of No 1380
Nuzhat al-nāẓir fi ma`rifat mā bayna al-awqāt min al-dawā'ir; A1. of No 1076
Nuzhat al-nāẓir fi taṣḥīḥ uṣūl (talkhīṣ zīj) Ibn al-Shāṭir; A3. of No 800
Nuzhat al-nāẓir fi waḍ` khuṭūṭ faḍl dā'ir; A12. of No 888
Nuzhat al-nāẓir fi'l-`amal bi'l-shams wa'l-qamar; Paris (2531/2)
Nuzhat al-nafs bi taqwīm al-shams; A3. of No 1323
Nuzhat al-naẓar fi ḥall al-shams wa'l-qamar; A2. of No 1214
Nuzhat al-naẓar fi'l-`amal bi'l-shams wa'l-qamar; A4. of No 842
Nuzhat al-nuẓẓār fi a`māl al-layl; Paris (2549/2)
Nuzhat al-qulūb; G1. of No 708
Nuzhat al-sāmi` fi'l-`amal bi'l-rub` al-jāmi`; A19. of No 750
Nuzhat al-ṭullāb fi ma`rifat al-awqāt bi'l-ḥisāb; Algiers (1457/1)
Nuzhat-nāma-yi `Alāī; E1. of No 467

-P-

Panjāh bāb dar shinākhtan-i asṭur-lāb; Tehran (University 842.
Panjāh bāb sulṭānī wa asṭurlāb; A1. of No 0115
Panjāh bāb-i sulṭānī = Panjāh bāb dar shinakhtan-i asṭurlāb; A1. of No 951
Pārchahā az `ilm-i nujūm; Dushanbe (Institute of Oriental Studies 2851/2)
Pursish u pāsukh; A12. of No 606
Pursish u pāsukh-i pādshāh-i Rūm u dukhtar-i pādshāh ba pādshāh-i `Irāq; Tehran (University 5182)

-Q-

R. fi'l-qaḍā' `alā'l-kusūf; A10. of No 79
R. fi'l-qadar; PH7. of No 317
Qā`ida; A22. of No 606
Qā`ida dar bayān-i zawāl gardīdan; Dushanbe (Institut-i Zabon u Adabiyot 202/7)
Qā`ida fi istikhrāj al-khusūf; A3. of No 1344
Qā`ida fi istikhrāj al-kusūf; A2. of No 1344
Qā`ida fi waḍ` jadwal ikhtilāf al-manẓar; A4. of No 1344
Qā`ida yu`rafu minhā al-ḥawādith fi mustaqbal al-zamān; A1. of No 1275
Qā`ida-yi istikhrāj-i ka`ab; M2. of No 1410
Qā'ida fi imtiḥān al-sā`a al-musta`mala fi aydī al-nās; A12. of No 1384
Qā'ida li al-sā`a al-muwāfiqa; A13. of No 1384
Qalā'id al-la'āli fi `amal al-ayyām wa'l-layālī; A9. of No 1176
Qalā'id al-shumūs fi istikhrāj qawā`id al-asūs; AG4. of No 956
Qalīd al-mushkilāt; M1. of No 0218
Qanū` al-murād fi wafq al-a`dād; Oxford (Bodleian Pers. I 79)
Qanūn al-ḥisāb wa ghunyat dhawī al-albāb; M5. of No 865
Qānūn al-wafq; A5. of No 1181
Qānūn juz' al-ta`līf li- Uqlīdis; Mu1. of No 256
Qānūn li- faṣl al-shams wa'l-qamar wa awqāt al-layl wa'l-nahār; A11. of No 317

Qānūn li tarḥīl al-shams wa'l-qamar fi'l-manāzil wa-ma`rifat awqāt al-layl wa'l-nahār; A2. of No 696
Qānūn-i adab; L1. of No 567
al-Qānūn al-Mas`ūdī fi'l-hay`a wa'l-nujūm; A1. of No 348
al-Qānūn fi'l-dunyā; E1. of No 989
al-Qānūn fi'l-farāiḍ; M10. of No 696
al-Qānūn fi'l-ṭibb; ME1. of No 317
al-Qānūn li 'Ūmāniyūs; A7. of No 402
K. fi'l-qarasṭūn; Me2. of No 103; Me2. of No 118; Me2. of No 74
al-Qaṣīda al-`ayniyya fī ma`rifat al-Qibla wa'l-awqāt wa'l-ṭawāli`; A19. of No 328
al-Qaṣīdat al-fārisiyya fi'l-ḥarakāt al-samāwāt; Istanbul (Süleymaniye AS 2666)
Qaṣīda fī ṭulū` al-manāzil; A1. of No 252
Qaṣīda; M1. of No 1203
Qaṣīda; M1. of No 768
Qaṣīda manẓūma fī mawāḍi` thawābit bi-ashkāl; Bombay (Asiatic Society 57)
Qaṣīda fī `ilm al-nujūm; A6. of No 6
K. li'l-Qāsim ibn `Ubaydallāh ibn Mūsā fī ma`rifat ālāt yu`rafu bihā ab`ād al-ashyā al-shākhiṣa fi'l-hawā' wa allatī `alā basīṭ al-arḍ wa aghwār al-awdiyya wa'l-abār wa `urūḍ al-anhār; M3. of No 135
R. ilā al-Qāsim ibn `Ubaydallāh; A9. of No 103
Qaṭ` al-suṭūḥ `alā nisab Abulūniyus; Leiden (University 1018)
Qaṭf al-anwār min Rawḍat al-azhār; A1. of No 1083
Qaṭf al-zalāl fī ma`rifat `amal al-hilāl; A6. of No 1214
K. qaṭf al-zāhirāt fi'l-`amal bi rub` al-dastūr; A24. of No 873
K. qaṭf al-zāhirāt fi'l-`amal bi rub` al-muqanṭarāt; A23. of No 873
Qawā`id al-`amal; AM1. of No 0175
Qawā`id al-`aqā'id; PH5. of No 606
R.-i qawā`id-i chand dar ma`rifat-i har harakatī u qisī u dā'irai u khaṭṭī u nuqtaī ki munajjimān bar ān `amal kunand; A6. of No 301
K. al-qawā`id wa'l-ḍawābiṭ fī ma`rifat istikhrāj al-Qibla; A2. of No 964
Qawā`id fī fann al-ḥisāb; Berlin (State 6003)
Qawā`id al-ḥisāb; Baku (Institute of Manuscripts B 2166/3)
R. fi'l-qawā`id al-ḥisābiyya wa'l-dalā'il al-handasiyya; M6. of No 845; M4. of No 1058
al-Qawā`id ḥisābiyya fī taḥwīlāt al-aqyās al-Rūmiyya ila'l-aqyās al-Miṣriyya; Me1. of No 1253
Qawā`id fī istikhrāj al-kusūr; M1. of No 017
Qawā`id fī ma`rifat samt al-Qibla; Princeton (Yehuda 3171a); Leiden (University 991/2)
Qawā`id fī ma`rifat samt al-Qibla wa'l-awqāt bi aqrab al-ṭuruq wa ashal al-ālāt; A5. of No 983
Qawā`id al-maṣdarayn; E1. of No 1263
al-Qawā`id al-muqni`a fī taḥwīlāt al-maqādir al-arba`a; Me2. of No 1253
K. al-qawā`id al-saniyya - sharḥ al-Tuḥfa al-ḥijāziyya fi'l-a`māl al-ḥisābiyya; M1. of No 1293
al-Qawā`id al-waḍḍāḥa fī `ilm al-misāḥa; M1. of No 1395
Qawām al-ḥisāb; Tehran (University 302, 928)
K. qawānīn `ilm al-hay`a; A3. of No 223
K. fī qawānīn mizājāt al-asṭurlāb al-shimālī ma`a al-janūbī; A13. of No 296
R. fī qawānīn al-ṣinā`a; A3. of No 285
R. fī qawānīn ṣinā`at al-shi`r; L1. of No 180
K. al-qawāri`; A14. of No 88
Qawl Aḥmad ibn Shākir fī tathlīth al-zāwiya; M4. of No 74
al-Qawl `alā'l-ajnās allatī bi'l-arba`; Mu1. of No 420
Qawl fī bayān al-khaṭā' al-`āriḍ fī ma`nā madhkūr fi'l-maqāla al-thālitha min kitāb Arisṭūṭālis fi'l-samā wa'l-`ālam wa fī jamī` al-shurūh wa'l-ta`ālīq allātī ta`riḍu fīhā bi īḍā ḥ al-ma`nā; A2. of No 458
Qawl fī bayān mā wahama fīhi Abū `Alī ibn al-Haytham fī kitābihī fi'l-shukūk `alā Uqlīdis; M3. of No 458
Qawl fī bayān mā wahama fīhi Abū Naṣr al-Fārābī `inda sharḥihī al-faṣl al-sābi` `ashar min al-maqāla al-khāmisa min al-Majisṭī wa sharḥ hadhā al-faṣl; A3. of No 458
al-Qawl fi'l-bighāl wa manāfi`hā; Z2. of No 76
Qawl (M. Mashrūḥa) fī birkār al-dawā'ir al-`iẓām; M19. of No 328
Qawl fī ḥall shukūk ḥarakat al-iltifāf; A1. of No 328
Qawl fī īḍāḥ al-wajh alladhī dhakara Baṭlamyūs anna bihī istakhraja man taqaddamahū masīrāt al-qamar al-dawriyya wa hiya al-mustawiyya = R. fī ḥarakat al-nayyirayn; A11. of No 103
Qawl fī īḍāḥ ghalaṭ Abī `Alī ibn al-Haytham fi'l-shakl al-awwal min al-maqāla al-`āshira min kitāb Uqlīdis fi'l-uṣūl; M4. of No 458
Qawl fī istikhrāj a`midat al-jibāl = Fi ma`rifat irtifā` al-ashkhāṣ al-qā'ima; M30. of No 328
Qawl fī istikhrāj ḍil` al-muka`ab min al-`adad muka`ab; M29. of No 328
Qawl fī istikhrāj mas'ala `adadiyya; M27. of No 328
Qawl fī istikhrāj samt al-Qibla; A4. of No 328
Qawl fī jawāb `an mas'ala fī ikhtilāf manẓar al-qamar; A6. of No 328
Qawl fi'l-jawāb `an mas'ala fi'l-misāḥa; M46. of No 328
al-Qawl fi'l-juz' alladhī lā yatajazza'; M3. of No 198
Qawl fi'l-kawākib al-ḥāditha fi'l-jaww; M11. of No 327

al-Qawl fī anna kull muttaṣil fa innahu munqasim ilā ashyā' tanqasimu dā'iman wa bi-ghayr nihāya; M2. of No 198; Paris (2457/42)
Qawl fi'l-makān; M23. of No 328
al-Qawl al-manshūr fī hilāl khayr al-shuhūr; St. Petersburg (Institute of Oriental D 601)
al-Qawl al-ma`rūf bi'l-gharīb fī ḥisāb al-mu`āmalāt; M24. of No 328
Qawl fī masāḥāt al-manāẓiriyya; Ph1. of No231
Qawl fī masa'il handasiyya =Fī mas'ala handasiyya; M21. of No 328
Qawl fī mas'ala ḥisābiyya; M42. of No 328
Qawl fī misāḥat al-kura; M6. of No 328
al-Qawl al-mubdi` fi'l-Mumti` = al-Qawl al-mubdi` fī sharḥ al-Muqni`; M6. of No 873
al-Qawl al-muhadhdhab fī kayfiyyat al-`amal bi'l-rub` al-mujayyab; A1. of No 1389
al-Qawl al-muḥkam fī ma`rifat kusūf al-nayyir al-a`ẓam; A1. of No 1323
R. fi'l-qawl fi'l-nafs al-mukhtaṣara min kitāb Arisṭū wa Aflaṭūn wa sā'ir al-falāsifa; PH3. of No 79
Qawl fi'l-qarasṭūn; Me4. of No 328
Qawl fi'l-qīrāt wa'l-dāniq wa'l-ḥabba wa'l-dirhām wa'l-dīnār; Paris (669)
Qawl fī qismat al-munḥarif al-kullī; M48. of No 328
Qawl fi'l-sabab alladhī ju`ilat lahū miyāh al-baḥr māliḥa; Mi1. of No 103
Qawl fī samt al-Qibla bi'l-ḥisāb; A5. of No 328
al-Qawl fi'l-shakl al-qaṭṭā`; Algiers (1446/4)
al-Qawl fī taḥqīq `amal samt al-Qibla; A1. of No 895
Qawl fī tasāwī zawāyā al-muthallath li qā'imatayn; Kazan (University 882)
Qawl tasāwī al-zawāyā al-thalātha li-qāimatayn li'l-muthallath; Moscow (State 222/2)
Qawl fī taṣḥīḥ masāil al-jabr bi'l-barāhīn al-handasiyya; M19. of No 103
Qawl fī thabt al-khaṭa' wa'l-taṣḥīf al-`āriḍayn fī jadāwil al-maqālatayn al-sābi`a wa'l-thāmina min kitāb al-Majisṭī wa taṣḥīḥ mā amkana taṣḥīḥuhi min hadhā; A1. of No 458
Qawl fī uṣūl al-misāḥa = K. al-misāḥa = Fi'l-misāḥa; M4. of No 328
Qawl `ala anna fi'l-zamān al-mutanāhī ḥaraka ghayr mutanāhiyya; Me1. of No 277
R. fī qawl Ibn al-Shāṭir fī bāb al-sihām; A32. of No 750
R. (mukhtaṣara) fī qaws quzaḥ; A1. of No 917
Qaws quzaḥ; Ph3. of No 606; Ph1. of No 963; Konya (Yusuf Ağa 1042/3-5)
al-R. al-quṭbiyya; Leiden (University 678/2)
R. fi'l Qibla wa ma`rifat samtihā; A12. of No 940
R.-yi qirānāt; Oxford (Bodleian Pers. I 1525)
R. al-qirānāt; A5. of No 88
R. fī qismat al-dāira; M30. of No 79
M. fī qismat al-khaṭṭ alladhī ista`malahū Arshimīdis fi'l-maqāla al-thāniya min kitābihī fi'l-kura wa'l-usṭuwāna; M22. of No 328
R. fī qismat al-qānūn; Mu7. of No 79
R. fī qismat al-qabbān bi ṭarīq al-handasa wa'l-misāḥa wa'l-ḥisāb bi'l-nisab al-arba`; Me4. of No 888
R. fī qismat al-qabbān bi ṭarīq al-ḥisāb; Me5. of No 888
R. fī qismat al-zāwiya al-mustaqīmat al-khaṭṭayn bi-thalāthat aqsām mutasāwiyya; M13. of No 277
R. fī qismat al-zāwiyya al-mustaqīmat al-khaṭṭayn bi-thalāthat aqsām mutasāwiyya; M6. of No 296
R. fī qismat ayām al-jum`a `alā'l-kawākib al-sab`a; A5. of No 169
al-K. al-Qiwāmī fi'l-ḥisāb al-hindī = al-K. fī `ilm al-misāḥa al-handasiyya; M3. of No 487
R. fī qiyām al-arḍ; Tashkent (Institute for Oriental Studies 4750/6)
R. fī qiyām al-arḍ wasaṭ al-samā' = `Illat qiyām al-arḍ fī ḥayyizihā = R. fi'l-jawāb `alā su'āl Abī Ḥusayn Aḥmad al-Suhaylī iyāhu `an `illat qiyām al-arḍ wasaṭ al-samā`; A7. of No 317
K. al-Qīyās; PH9. of No 180
Qibla; Baku (Institute of Manuscripts B 4349); Konya (Yusuf Ağa 1042/9); Tehran (Majlis 176, 1804/1, 3951/1); Tehran (University 3337/8, 3819/4); A1. of No 1390
Qibla-yi āfāq ;A6. of No 1160
Qīblat al-āfāq = Tuḥfa-yi Ḥātimiyya; A4. of No 1069
K. al-Qibla wa'l-zawāl; A2. of No 97
K. al-qinn; A9. of No 157
K. al-qirānāt; A1. of No 228
Qirānāt-i Īrānshāhı; A1. of No 1024
Fī qirānāt al-kawākib fi'l-burūj; A2. of No 205
K. fi'l-qirānāt wa'l-adyān wa-'l-milal; A5. of No 18
K. al-qirānāt wa taḥāwīl sinī al-`ālam; Istanbul (Nuruosmaniye 2795/1)
Fi'l-qisiyy al-mutashābiha; M2. of No 119
K. fī qisma al-arāḍī; M1. of No 032
K. qismat ma`mūr al-arḍ wa hay`at al-dunyā; AG1.of No 238
Fī qismat al-miqdārayn al-mukhtalifayn al-madhkūrayn fi'l-shakl al-awwal min al-maqāla al-`āshira min kitāb Uqlīdis; M11. of No 328
Fī qismat al-muthallathāt kullihā bi'l-awtār; Paris (Pers. 772/15)
Qism-i thālith az kitāb-i Sharḥ-i mushkilāt al-farāid; Tashkent (Institute for Oriental Studies 2245/10)
Qiṭ`a fī ma`rifat ẓill al-zawāl bi'l-aqdām fi'l-ashhur al-Rūmiyya; Cairo (Mīqāt 948/4)

Qit'a fi tahrir al-manazil al-qamariyya wa anwa'iha wa tulu' al-kawakib al-thabita bi'l-fajr; A6. of No 1017

M. fi anna qubul al-jism al-tajzi'a la yaqif wa la yantahi ila ma yatajazza'; M1. of No 306

K. al-qur'a al-Ma'muniyya; A1.of No 32

Qurada-yi tabi'iyyat; Ph3. of No 317

Qurra al-'ayn fi misahat zarf al-qullatayn; M2. of No 1011

Qurrat 'ayn al-mahara li ithbat istikhraj al-majhul bi 'amal al-khata'ayn bi'l-kaffat; M1. of No 1420

Qurrat al-'ayn fi bayan al-madhhabayn fi 'ilm al-fara'id; M24. of No 873

Qurrat al-nazir fi ma'rifat wad' khutut fadl al-da'ir; A44. of No 873

Fi'l-qustas al-mustaqim; Me2. of No 420

al-Qustas al-mustaqim dar hisab; Mashhad (Imam Riza 93)

Qustas al-mustaqim Mashhad (Imam Riza 146)

Qustas al-mu'adala fi 'ilm al-jabr wa'l-muqabala; M7. of No 589

Qutb al-zahirat fi'l-'amal bi-rub' al-muqantarat; Algiers (1460/2)

Qutb al-zahirat fi'l-'amal bi rub' al-muqantarat; A20. of No 873

Qutb az-zahirat fi'l-'amal bi rub' al-muqantarat; A2. of No 842

K. al-qustas al-mustaqim; PH5. of No 415

M. fi anna al-qutr ghayr musharik li'l-dil'; M5. of No 198

R. fi anna al-qutr al-murabba' la yushariku al-dil' min ghayr handasa; M2. of No 142

K. fi qutu' al-ustuwana wa basitiha; M18. of No 103

K. fi quzah; Ph2. of No 77

-R-

Rabi' al-munajjimin fi sharh Fusul al-thalathin; A1. of No 1184

K. al-radd 'ala Batlamyus fi hay'at al-falak wa'l-ard; A1.of No 127

Fi'l-radd 'ala Jalinus fi ma naqada fihi Aristutalis li a'da al-insan; ME1. of No 180

R. fi'l-radd 'ala'l-mananiyya fi'l-'ashara masail fi mawdu'at al-falak; A19. of No 79

al-Radd 'ala al-Misma'i fi raddihi 'ala al-qa'ilin bi qidam al-hayula; Ph4. of No 142

Radd wa Qabul; A4. of No 1143

Raf' al-hijab 'an qawa'id al-hisab; M4. of No 980

Raf' al-hijab 'an wujuh a'mal al-hisab; M8. of No 696

Raf' al-ishkal bi zuhur al-'ashara fi'l-'ashara fi ghalib al-ashkal; M1. of No 1367

Raf' al-ishkal fi misahat al-ashkal; London (British Sup. 10/2)

Raf' al-ishkal fi misahat al-ashkal; M1. of No 931

Raf' al-khilaf fi 'amal daqa'iq al-ikhtilaf; A1. of No 1018

Ra'f al-ghisha' 'an waqtay al-'asr wa'l-'isha'; A1. of No 978

K. al-raha'im wa'l-maqayis; A10. of No 46

Rahat al-fu'ad fi taysir al-Zad; A5. of No 1017

Rahat al-qulub min ta'b al-atnab fi'l-juyub; A1. of No 777

K. al-rahma; ME2. of No 9

Ra'i al-kawakib; Cairo (Miqat 533)

Rajaz; A1. of No 722

Raml wa asturlab wa 'adad; Rasht (Public P 637)

Raqa'iq al-asrar fi hisab daraj wa daqa'iq a'zam dawwar; M3. of No 1253

Raqa'iq al-haqa'iq fi hisab al-daraj wa'l-daqa'iq; M1. of No 873

al-R. fi rasad Dimashq; A16. of No 46

al-R. fi'l-rasad; A1. of No 897

Rasa'il handasiyya jarat kitabatuha bayna Ibn al-Zubayr wa bayna Abi Nasr ibn al-'Aynzarbi; M1. of No 460

Rasa'il Ikhwan al-Safa' wa Khillan al-Wafa'; E1.of No 226

Rasa'il; M16. of No 865

Rasa'il majmu'a wa 'uyun; E1. of No 262

Rasa'il; PH2. of No 374

Rasail zij Habash tashih Abu [a]majur; A11. of No 157

Rasail Qasim 'Ali Qa'ini dar 'ilm-i hay'at; A1. of No 1108

Rashahat al-funun; E1. of No 1278

Rashf al-zalal fi ma'rifat istikhraj qaws makth al-hilal; A10. of No 1323

Rashh al-hisab; M1. of No 0238

M. fi rashikat al-Hind; M3. of No 348

R. fi rasm alat al-sa'a al-ma'ruf bi'l-binkam; Me2. of No 563

R. fi rasm al-asturlab; A1. of No 0224

R. fi rasm al-asturlab bi'l-handasa = R. fi wad' almuqantarat; A3. of No 1176

R. fi rasm al-basita bi tariq al-hisab wa'l-miqyas; A11. of No 1390

R. fi Rasm al-Dawa'ir al-Falakiyya fi Rub' al-Muqantarat; A5. of No 1387

R. rasm al-khatt; M1. of No 0150

R. fi rasm al-kura; A1. of No 1344

R. fi rasm al-muqantara wa safa'ih al-asturlab bi tariq al-handasa; A13. of No 873

R. fi rasm al-musaddas fi'l-murabba' wa'l-murabba' 'ala'l-musaddas; M42. of No 296

M. fi rasm al-qutu' al-thalatha; M2. of No 174

R. fi rasm al-rub' al-muqantar wa'l-mujayyab; A1. of No 1406

R. fi rasm rub` al-muqanṭarāt; A9. of No 933
al-Rauḍāt al-muzhirāt fi'l-`amal bi rub` al-muqanṭarāt; A5. of No 715
Rauda al-munajjimın; A1. of No 0112
al-Rawḍ al-`aṭir fi talkhīs (mukhtaṣar) zīj Ibn al-Shāṭir; A3. of No 795
al-Rawḍ al-azhar fi'l-`amal al-rub` al-musattar; A8. of No 815
Rawḍ al-azhār fi `ilm waqt al-layl wa'l-nahār; A1. of No 790
Rawḍa al-fahūm; E1. of No 1002
Rawḍa al-munajjimīn; A1. of No 820
Rawḍa al-taslīm; PH5. of No 606
Rawḍat al-aḥbāb fi sharḥ Khulāṣat al-ḥisāb; M1. of No 1196
Rawḍat al-muhandisīn; M1. of No 0192
Rawḍat al-munajjimīn; A1. of No 467
R. al-rawḍāt al-muzhirāt fi'l-`amal bi rub` al-muqanṭarāt; A1. of No 0239
Rawḍat al-nāẓir fi kayfiyyat waḍ` khuṭuṭ faḍl al-dā'ir; A1. of No 1084
Rawshanaī-nāma; PH2. of No 393
al-Rawḍāt al-zāhirāt fi'l-`amal bi rub` al-muqanṭarāt; A22. of No 873
al-Rawḍāt al-ẓāhirāt fi'l-`amal bi rub` al-muqanṭarāt; A9. of No 750
Rayḥānat al-rūḥ fi rasm al-sā`āt `alā mustawī al-suṭūḥ; A1. of No 1004
Rayḥānat al-rūḥ fi rasm al-sā`āt fi ma`rifat al-awqāt; A1. of No 1291
al-Rayy wa'l-ishbā` fi sharḥ Kashf al-qinā`; A3. of No 1017
Fi anna ra`y al-`Arab fi marātib al-`adad aṣwab min ra'y al-Hind fihā; M14. of No 348
Riyāḍ al-faḍā'il = Barā`at al-istihlāl wa mā yata`allaqu bi'l-shahr wa'l-hilāl; A1. of No 1096
al-Riyaḍ al-naffāḥa fi `ilm al-misāḥa; M1. of No 960
Riyaḍ al-nāṣiḥīn; E1. of No 826
Riyāḍ al-nayyirayn fi `amal al-kusūfayn; A1. of No 1254
M. riyāḍiyya; M12. of No 1080
Riyāḍiyāt; M7. of No 1198
Riyāḍiyāt-i ḥisāb; Dushanbe (Ferdowsi 270)
K. al-riyāḥ; Mt1. of No 94
K. al-riyāḥ, wa'l-hawā wa'l-nār; Mt1. of No 143
R. rub`; A6. of No 990
R. fi'l-rub` al-`Alā'ī; A29. of No 750
R. rub` al-awtār; Princeton (Yehuda 373c)
(R.) (-yi) (fi) rub`(-i) (al-)dā'ira; Cairo (Mīqāt 969/4); Istanbul (Süleymaniye AS 2634); Oxford (Bodleian Tur. 2211/1.); (Vienna Academy 348); A1. of No 1272
(R.)(Fī)('l-)Rub` al-kāmil; A11. of No 888; A11. of No 903; A28. of No 873; A17. of No 750
R. al-rub` al-kāmil al-musammā bi-Hidāyat al-`āmil; Istanbul (Süleymaniye, Laleli 2716/3)
R. fi'l-rub` al-mujannaḥ fi ma`rifat jayb al-qaws wa qaws al-jayb; A5. of No 732
R. (dar) (fi'l-)(al-)rub`(-i) (al-) mujayyab; A3. of No 1059; A4. of No 872; A6. of No 737; A3. of No 1196; Beirut (University of St.Joseph 207); A1. of No 0226; A1. of No 0273, A5. of No 842; A1. of No 1140; A1.of No 942; A5. of No 1006; A5. of No 808; A30. of No 990; A23. of No 990; A27. of No 990; A8. of No 977; A1. of No 1030; A18. of No 606; A1. of No 885; A1. of No 1332
R.-yi rub` al-mujayyab dhū'l-qawsayn = Rub`-i mujayyab dhū'l-qawsayn alatī wa isti`mālī risālasī; A1. of No 1387
R. fi'l-rub` al-mujayyab al-musammā bi'l-marāṣid = R. fi'l-rub` al-mujayyab = Ma`rifat al-rub` al-mujayyab = al-Marāṣid; A6. of No 1390
Rub` al-mujayyab fi'l-zīj; Kazan (University 837)

(R.) Rub`-i Muqanṭar; A6. of No 1387; A6. of No 686
R. fi rub` al-muqanṭar fi'l-mīqāt; A1. of No 1250
R. (fi) (dar) rub` al-muqanṭarāt; Bratislava (University 303, 304.); (Yehuda 2334, 3037, 5924.); A4. of No 903; A33. of No 990; A2. of No 1234; A7. of No 940; Fas (Zawiya 9d); Paris (2547/19); A5. of No 1390
R. `alā rub` al-muqanṭarāt mushtamila `alā muqaddima; Berlin (State 5863)
R. fi rub` al-musattar = R. fi kayfiyyat al-`amal bi'l-rub` al-mansūb li'l-musattar; A5. of No 737
R. fi'l-rub` al-musattar bi `arḍ Dimashq; A4. of No 797
R. fi rub` al-shakāziyya; A2. of No 761; A6. of No 815
R. fi al-Rub` al-Shīkāzı;. A7. of No 1387
R. fi'l-rub` wa'l-asṭurlāb wa'l-taqwīm; A39. of No 873
R.-yi rub`iyya; Oxford (Bodleian Pers. I 1545/4)
Rub` Tahtası Risalesi; A2. of No 1111
Rubā`īyyāt; L1. of No 420
M. fi'l-rukhāma al-ufuqiyya; A11. of No 328
(R.)(K.) al-rukhāma; A3. of No 174; A1. of No 987
K. al-Rūjar; G1. of No 470
Rushd al-ṭālib; Damascus (al-Zahiriyya 3077)
Rusūm li ba`ḍ al-ālāt al-falakiyya; A1. of No 1348
K. fi ru'yat al-ahilla min al-jadwal; A6. of No 103
Ru`yat al-hilāl `alā ra`y Abī Ja`far Muḥammad ibn Mūsā ibn Shākir; A1. of No 74
(R.) (fi)Ruy'a(t)(-i) (al-)hilāl; Mashhad (Imam Riza 88.); Tehran (University 950/3).; Tehran (Dihkhuda 283/1); A2. of No 1383; A3. of No 520
R. fi ru`yat al-kawākib bi'l-layl lā bi'l-nahār; A8. of No 317
M. fi ru'yat al-kawākib; A24. of No 328
Rūznāma Dārendevī; A1. of No 1315

Ruznāma-yi Sheikh Wafā; A1. of No 872

-S-

K. fi'l-sā'āt al-māḍiyya fi'l-layl; A6. of No 269

Sa'ādat-nāma; PH2. of No 393; M1. of No 713

Fī'l-sā'āt al-ma'mūla 'alā ṣafā'iḥ al-asṭurlāb; A1. of No 223

Sab' samāwāt; A1. of No 966

al-Sab' al-Sayyār; A1. of No 965

al-Sab' al-shidād; A1. of No 073

Fī sabab al-ajzā' al-māddiyya wa'l-hay'a al-maḥsūsa li'l-Thurayā; St. Petersburg (Institute of Oriental Studies B 1323/1)

K. fi'l-sabab alladhī ṣārat lahū miyāh al-baḥr māliḥa; Mt3. of No 77

R. fi'l-sabab alladhī lahū nasaba al-qudamā' al-ashkāl al-khamsa ilā'l-usṭuqsāt; M5. of No 79

K. sabab khalq al-jibāl; Mi2. of No 103

R. fī Sabab ta'akhkhur Ghurūb al-Shams; A23. of No 1004

K. sabab wuqūf al-arḍ wasaṭ al-falak = Fī 'illat qiyām al-arḍ wasaṭ al-falak; A2. of No 142

R. fī sabab ẓuhūr al-kawākib laylan wa khafāhā nahāran; A1. of No 485

R. al-Ṣābī' ilā Abī Sahl al-Kūhī yas'aluhū al-naẓar fī shukūk 'araḍat lahu fī mā istakhrajahū; Me2. of No251

K. fī anna sabīl al-athqāl allatī tu'allaqu 'alā 'amūd wāḥid mufaṣṣalan hiya sabīluhā idhā ju'ilat thiqlan wāḥidan mabthūthan fī jamī' al-'amūd 'alā tasāwī; Me3. of No 103

Sabn al-nuẓār naẓm Nuzhat al-nuẓẓār fī 'ilm [al-ghubār; Princeton (Garr. 1046)

K. al-sab'in; Ch1. of No 9

Ṣad bāb dar asṭurlāb; Hyderabad (Central State Riyad. 114. = Calcutta 1500/4); (Asiatic Society of Bengal 1500/4)

R.-yi Ṣādiqiyya dar ḥisāb; M1. of No 1112

Ṣadr al-ḥisāb; M1. of No 084

Ṣadr li-Banū Mūsā li kitāb Abulunyūs fi'l-Makhrūṭāt; M1. of No 74

Safar-nāma; G1. of No 393

Safīna; E1. of No 1347

al-ṣafīḥa al-āfāqiyya; A2. of No 47; A12. of No 194

al-Ṣafīḥa fī'l-asṭurlāb; Tehran (University 920)

R. al-ṣafīḥa al-āfāqiyya al-musammā bi'l-jāmi'a; A4. of No 269

R. al-ṣafīḥa fi'l-asṭurlāb = al-Ṣafīḥa; A7. of No 1058

R. al-ṣafīḥa al-jāmi'a li'l-'urūḍ kulliha; (Hamburg137/2)

Fī'l-ṣafīḥa li-kull al-'urūḍ; A1. of No 119

Fī'l-ṣafīḥa al-majma'iyya; Paris (2532/2)

R. dar ṣafīḥa; St. Petersburg (Institute of Oriental Studies A 1005)

R. al-ṣafīḥa al-shakāziyya; Cairo (Taymur riyad. 159/4.); A2. of No 774

Fī'l-ṣafīḥa al-zarqāliyya; Paris (2547/10)

R. 'alā'l-ṣafīḥa al-zarqāliyya; Fas (Zawiya 4e)

Ṣaḥīfat al-nūr fi'l-ḥikma; Ph2. of No 972

al-Sahl al-mumti' fi'l-'amal bi'l-basīṭ al-murtafi'; A20. of No 888

R. fi'l-saḥiyya; M1. of No 990

R. fi sahw waqa'a li-Banī Mūsā fi'l-burhān 'alā'l-shakl al-akhīr; M1. of No 378

M. ṣaghīra fī i'tibār miqdār al-layl wa'l-nahār fī jamī' al-arḍ li-ta'rīf kawn al-sana yawman taḥt al-quṭb; A28. of No 348

Sajanjal al-Aflāk fi Ghāyat al-Idrāk; A2. of No 1230

al-R. al-Sakhāwiyya = al-Muqaddima al-Sakhāwiyya fi'l-ḥisāb = Mukhtaṣar fī 'ilm al-ḥisāb; M1. of No 1026

R. dar sākht-i asṭurlāb; A6. of No 802

Salamān wa Absal; L1. of No 882

R. dar ṣalawāt wa aḥkām-i nujūm; A3. of No 27

R. dar sālhā-yi kabīsa; Tehran (Senat 7572/4)

Sāl-nāma; A1. of No 148; A10. of No 1332

al-R. al-Ṣāliḥiyya fī taḥṣīl al-a'māl (al-kamāl) al-jaybiyya; A12. of No 873

al-R. al-Ṣāliḥiyya fi'l-'amal bi'l-rub' al-sharqī al-shimāli (al-maqṭū'); A32. of No 873

al-R. al-Ṣalāḥiyya fi'l-qawā'id al-ḥisābiyya = R. fi'l-ḥisāb; M5. of No 808

(K.) al-samā' wa'l-'ālam; A9. of No 194; A5. of No 1044

al-Ṣamad fī bayān anna al-samāwāt bi ghayr 'amad; A2. of No 818; A2. of No 259

(M)(K.) fi'l-samt; A9. of No 283; A29. of No 328

(R.)(K.)Fī samt al-Qibla; A2. of No 137; A18. of No 299; A5. of No 269; A21. of No 1004; A1. of No 394; A12. of No 296; A2. of No 135; A4. of No 1262; A8. of No 808; G1. of No 356; A11. of No 1004; A29. of No 606; Tabrīz A30. of No 606

R. fi'l-sana al-kabīsa wa sabab farqihā 'an al-sana al-basīṭa wa taliha ashkāl al-ajrām al-samāwiyya wa dawaran ḥawl al-shams sayyārātihā; St. Petersburg (Institute of Oriental B 2999/8)

(R.)(M.)(K.) (dar)(fī) ṣan'a (t-i) (al-)asṭurlāb; A1. of No 070; A7. of No 348; Mashhad (Mawlawi 513/1.); Tehran (Majlis 4911.); Tehran (University 2480/4. 2788/4.); A7. of No 308

R. fī ṣan'at al-asṭurlāb bi'l-handasa; M33 of No 79

R. dar ṣan'at-i asṭurlāb shimālī; Kazan (University 13)

K. ṣan'at al-asṭurlāb bi'l-burhān; M7. of No 277

K. San'at al-asṭurlāb al-musaṭṭaḥ; A12. of No 46; A3. of No 108

R. fī ṣan'at al-asṭurlāb bi'l-ṭarīq al-ṣinā'ī ilā Abī 'Abdallāh Muḥammad ibn 'Alī al-Ma'mūnī; A11. of No 299
K. ṣan'at al-asṭurlābāt wa'l-'amal bihā; A4. of No 18
Dar ṣan'at-i asṭurlāb wa ghayrihi; Bombay (Asiatic Society 59)
Dar ṣan'at-i kura; Berlin (State Pers. 326/4)
K. fī ṣan'at al-kura; G5. of No 348
K. fi' sanat al-shams; A10. of No 74
K. fī sanat al-shams bi'l-raṣad; A7. of No 103
R. dar ṣan'at-i tasṭīḥ-i asṭurlāb; M3. of No 963
al-Sanhājiyya; A1. of No 0181
al-R. al-ṣanā'iyya; Ph2. of No 0156
Fī ṣan'at a'ḍā' mīzān al-ḥikma; Me4. of No 423
San'at al-asṭurlāb al-shimālī wa'l-janūbī; A13. of No 46
Ṣan'at al-banādiq; A3. of No 239
Fī sankalita al-a'dād; M12. of No 348
K. sarā'ir al-ḥikma; PH1. of No 173
Sarā'ir al-ḥikma fī 'ilm al-nujūm; A1. of No 173
R. fī anna saṭḥ al-dāira mumkin an yakūna musāwiyyan li murabba' mustaqīm al-khuṭūṭ; St. Petersburg (National Khanykov 144/14)
R. fī anna saṭḥ mā' al-baḥr kurrı; Ph13. of No 79
al-Sawāniḥ al-karīḥa fī sharḥ al-Ṣafīḥa; A1. of No 1369
K. al-ṣaydana fī'l-ṭibb; ME1. of No 348
M. fī sayr sahmay al-sa'āda wa'l-ghayb; A20. of No 348
M. al-Sayyārāt; A5. of No 1314
Se fāida; Tehran (Sipahsalar 558/2)
Sefer ha-mispar; M1. of No 943
Shabaka-yi Māh; M4. of No 1174
al-R. al-shāfiya 'an shakk fī'l-khuṭūṭ al-mutawāziyya = Bayān al-muṣā-dara al-mashhūra li'l-ḥukamā' = Sharḥ al-muṣādara al-mashhūra li kitāb al-Uṣūl ma' dhikr al-barāhīn allatī uqīmat 'alayhā; M15. of No 606
R.-yi Shāh Shujā' dar ḥikma; PH1. of No 1148
Shāhid-i Ṣādiq; E1. of No 1112
R. al-Shaikh Abi Ali al-Husayn b. Abdallah b. Sina al-Buhari radıyallahu anhu ila Abi Abdallah al-Barqi fi İlm al-San'a Jawaban li-Sualihi fi'l-Ma'na; Ch1 of No 317
al-Shakkāziyya; A3. of No 402
Fī shakl Banū Mūsa; M12. of No 328
K. al-shakl al-handasī al-ladhī bayyanahu Jālīnūs; M6. of No 74
Fī shakl fī'l-kura wa'l-usṭuwāna; M4. of No 118
K. al-shakl al-mudawwar al-mustaṭil; M5. of No 74
(R.)(M)Fī'l-shakl al-qaṭṭā'; M1. of No 448; M6. of No 635; M9. No 103; M8. of No 296
Shāmil; M3. of No 825
al-K. al-shāmil = al-Shāmil fī'l-jabr wa'l-muqābala = al-Kāmil fī'l-jabr wa'l-muqābala; M4. of No 124
al-K. al-shāmil fī dalā'il al-Qibla wa'l-hisāb al-Rūmī wa'l-manāzil; A1. of No 960
Shams-i-Bāzeghā; A1. of No 1120
Shams al-handasa; M1. 0227
Shams-i laylān; M1. of No 981
Shams al-ma'ārif wa laṭā'if al-'awārif; My1. of No 554
al-Shams al-muḍī'a 'ala al-risāla al-Fatḥiyya; A1. of No 1042
K. al-shams wa'l-qamar; A1. of No 25
al-R. al-shāmila; M1. of No 435
al-R. al-shamsiyya fī'l-a'māl al-jaybiyya; A4. of No 888
al-R. al-shamsiyya fī'l-ḥisāb = al-R. al-shamsiyya fī'l-uṣūl al-ḥisābiyya; M1. of No 686
al-R. al-shamsiyya fī'l-qawā'id al-ḥisābiyya; M2. of No 657
al-R. al-shamsiyya fī'l-qawā'id al-manṭiqiyya; PH1. of No 616
al-Shaqā'iq al-nu'māniyya fī 'ulamā' al-dawla al-'Uthmāniyya; HS1. of No 974
al-R. al-Sharafiyya fī'l-nisab al-ta'līfiyya = K. al-mūsīqā; Mu2. of No 641
R.-yi Sharafiyya; Mu1. of No 825
Sharḥ al-Adwār; Mu1. of No 807
R. dar sharḥ-i ālāt-i raṣad; A12. of No 802
Sharḥ-i ālāt-i raṣadiyya; Hyderabad (Central State Riyad. 129)
Sharḥ Ashkāl al-ta'sīs; M1. of No 694
Sharḥ Ashkāl al-ta'sīs handasa; Bombay (Asiatic Society 2)
Sharḥ Ashkāl al-ta'sīs li Shams [al-Dīn] al-Samarkandī; Istanbul (Süleymaniye 845)
Sharḥ mā ashkala min muṣadarāt kitāb Uqlīdis; M3. of No 420
Sharḥ aḥvāl Davā'ir Aqālīm-i Sab'a va Rub'u Maskūn; A3. of No 1164
Sharḥ aḥwāl dawā'ir al-aqālīm al-sab'a li'l-rub' maskūn; G1. of No 1164
Sharḥ al-āla al-ma'rūfa bi dhāt al-ḥalaq allatī dhakarahā Baṭlamyūs fī awwal al-qawl al-khāmis min kitāb al-Majisṭı; A6. of No 79
Sharḥ al-'Alāiyya; M1. of No 055
Sharḥ al-a'māl al-handasiyya; M2. of No 576
Sharḥ al-'Aqā'id al-nasafiyya; PH1. of No 772
M. fī sharḥ al-Arithmāṭīqā 'ala ṭarīq al-ta'līq; M50. of No 328
M. fī sharḥ Armunīqā 'alā ṭarīq al-ta'līq; Mu1. of No 328
Sharḥ al-'ashrat maqālāt min kitāb al-Uṣūl; M5. of No 1080
Sharḥ-i Ashkāl al-ta'sīs; M24. of No 606

Sharḥ bāb al-ḥisāb; Calcutta (Asiatic Society of Bengal 1473)
Sharḥ al-bāb al-thāmin = Ta`līqāt `alā al-bāb al-thāmin fi'l-jabr wa'l-muqābala; M9. of No 1058
Sharḥ ba`ḍ maqālāt Uqlīdis; M3. of No 1291
Sharḥ Bahja al-ṭullāb fi'l-asṭurlāb; A1. of No1316
Sharḥ-i Bīst bāb; A1. of No 919
Sharḥ-i Bīst bāb asṭurlāb-i khwāja Naṣīr; Bombay (Asiatic Society 7)
Sharḥ-i bīst bāb dar asṭurlāb; A1. of No 1069; A5. of No 686; Tehran (Majlis 2466/1)
Sharḥ-i Bīst bāb dar asṭurlab musammā bi-Mi`yār-i āftāb; Istanbul (Süleymaniye AS 2677)
Sharḥ-i Bīst bāb dar ma` rifat-i usṭurlāb; A10. of No 938; A4. of No 833
Sharḥ-i bīst bāb dar taqwīm; A2. of No 1069
Sharḥ-i Bīst bāb dar usṭurlāb; A1. of No 1178
Sharḥ-i Bist bāb Niẓām al-Dīn; A2. of No 1181
Sharḥ Bughyat al-ṭullāb; (Vienna 344)
Sharḥ al-dā'ira al-hindiyya = Risāla al-dā'ira al-hindiyya; A1. of No 1063
Sharḥ dhawāt al-asmā'; M14. of No 865
Sharḥ-i farāiḍ; Dushanbe (Institute of Oriental Studies 1279/3); M2. of No 1199
Sharḥ Farā'id al-bahā'iyya bi Īḍā ḥ al-maqāṣid; Istanbul (Süleymaniye AS 2716)
Sharḥ-i Farā'iḍ al-Sajāwāndī; M1. of No 1195
Sharḥ al-Farā'iḍ al-Sirā-jiyya; M3. of No 788; M9. of No 749
R. sharḥ al-Fatḥiyya fi'l-a`māl al-jaybiyya; A1. of No 1331
Sharḥ al-Ḥāwī fi'l-ḥisāb li-Ibn al-Hā'im; M1. of No 959; M2. of No 1349
Sharḥ-i Ḥālāt-i raṣad; Tehran (Sipahsalar 555/2)
Sharḥ Ḥall al-Khulāṣa; (Vienna 1135); M1. of No 1187
Sharḥ-i Hay`at-i Qūshjī; A4. of No 972; Mosul (Hajiyat 302.); A1. of No 1079
Sharḥ Hidāyat al-ḥikma; E2. of No 694; E1. of No 839; E1. of No 840; E1. of No 841
Sharḥ Ḥikma al-`ayn; E1. of No 1003; E1. of No 694; E1. of No 808; E1. of No 890
Sharḥ Ḥikmat al-ishrāq; PH1. of No 668
Sharḥ al-Ishārāt; PH2. of No 535; PH3. of No 606
Sharḥ-i Ishārāt li-Sheikh al-Raīs; PH1. of No 0156
Sharḥ-i istikhrāj-i zīj; Rampur (Rada 1214)
K. sharḥ al-jabr wa'l-muqābala li'l-Khwārizmī; M5. of No231
R. fī sharḥ jadāwil Zīj Zaqūṭū; A2. of No 746
Sharḥ al-Jaghmīnī; A1. of No 808; Damascus (al-Zahiriyya 3110); Istanbul (Süleymaniye Selimiye 377); Beirut (University of St.Joseph 187)
Sharḥ al-jam` wa'l-tafrīq; M4. of No231
al-Sharḥ al-kabīr `alā Nuzhat al-ṭullāb fī `ilm al-ḥisāb = Maslak al-ṭullāb fī sharḥ Nuzhat al-ḥussāb; M2. of No 1048
Sharḥ al-Kāfī fi'l-ḥisāb; M1. of No 418
R. fī sharḥ kayfiyya istikhrāj al-taqwīm; A1. of No 1121
Sharḥ àlā Khulāṣat al-ḥisāb li'l-`Āmilī; M2. of No 1155
Sharḥ Khulāṣat al-ḥisāb; M1. of No 1068; Baku (Institute of Manuscripts A 259/1); Baku (Institute of Manuscripts B 2524/1); Hyderabad (Salar Jung Riyad. 17); Ashqabad (2537/18).; Istanbul (Süleymaniye Hamidiye 872/2); M1. of No 1290; M1. of No 0219; M1. of No 1063; M1. of No 1071; M1. of No 1072; M1. of No 1081; M1. of No 1153; M1. of No 1178; M1. of No 1186; M1. of No 1191; M1. of No 1262; M1. of No 1288; M1. of No 1296; M1. of No 1304; M1. of No 1305; M1. of No 1317; M1. of No 1342; M1. of No 171; M4. of No 1291; Manchester (Rylands Lindesiana 705a); Tehran (University 911); Mashhad (University 331); M1. of No 1287; M1. of No 1302; M3. of No 1080
Sharḥ-i Khulāṣa al-ḥisāb; Patna (Bankipore 1033-1034)
Sharḥ kitāb Abī Kāmil fi'l-jabr; M2. of No 163
Sharḥ Kitab al-adwār; Mu1. of No 753
Sharḥ kitāb Arisṭuṭālis fi'l-samā' wa'l-`ālam; PH3. of No 512
Sharḥ li kitāb Diyūfānṭus al-Iskandarānī; M9. of No 487
Sharḥ K. al-fuṣūl li'l-Farghānī; A4. of No 205
Sharḥ-i kitāb-i Ḥajjī Khalīl; M1. of No 1107
Sharḥ kitāb fī `ilm al-hay'a; (Kabul Ettalaat, 28)
Sharḥ kitāb al-jabr wa'l-muqābala li-Abī Kāmil; M1. of No 185
Sharḥ kitāb al-Jaghmīnī; A2. of No 788
Sharḥ kitāb fi'l-jam` wa'l-tafrīq; M2. of No 236
Sharḥ kitāb al-Ma`khūdhāt li Arshimīdis; M2. of No 341
Sharḥ kitāb al-Manāẓir li-Uqlīdis; Ph6. of No 79
Sharḥ kitāb al-Maqūlāt; PH9. of No 180
Sharḥ kitāb Muḥammad ibn Mūsā al-Khwārizmī fi'l-jabr; M1. of No 236
Sharḥ Kitab al-najāt; E5. of No 535
Sharḥ kitāb Nuzhat al-huẓẓār fī `ilm al-ghubār; M1. of No 997
Sharḥ kitāb ṣan`at al-asṭurlāb; A1. of No 302
Sharḥ K. al-shamsiyya fī 'l-ḥisāb; Oxford (Bodleian I 1028)
Sharḥ K. al-tabṣira fī `ilm al-hay'a; A1.of No 700
Sharḥ K. al-ukar li-Manālāws; St. Petersburg (National Khanykov 144/5); M2. of No 664
Sharḥ kitāb āl-Uṣūl li-Uqlīdis; M1.of No 71; M1. of No 135

Sharḥ K. ẓāhirāt al-falak; A10. of No 135
Sharḥ kitāb al-zīj al-mukhtaṣar; A1. of No 1337
Sharḥ Kūshyār fi'l-falak; Tripoli (Waqfs T 26/1)
Sharḥ-i lugurītma = Sharḥ jadāwil al-ansab-i lugurītma; M2. of No 1390
Sharḥ al-Lum`a fī ḥall al-kawākib al-sab`a; A1. of No 1175
Sharḥ al-Lum`a fī `ilm al-ḥisāb; M8. of No 873
Sharḥ al-Lum`a fi'l-ḥisāb; M1. of No 1049
Sharḥ-i Madkhal; Baku (Institute of Manuscripts A 423/1)
Sharḥ al-Majisṭī; A3. of No 655; A1. of No 180; A5. of No 135; A1. of No 327; A3. of No 194; A2. of No 9
Sharḥ manāzil al-qamar; Tashkent (Institute for Oriental Studies 2092)
Sharḥ `alā manẓūma fi'l-ḥisāb; M1. of No 1103; Princeton (Yehuda 1163)
Sharḥ Manẓūma fī manāzil al-qamar; A1. of No 982; A4. of No 1377
Sharḥ Manẓūma fi'l-misāḥa al-musammāt bi Nukhbat al-tuffāḥa = Sharḥ Nukhbat al-Tuffāḥa fī `ilm al-misāḥa; M2. of No 1340
Sharḥ Manẓūmat [Ibn] Abī al-Rijāl; Istanbul (Süleymaniye, Laleli 2751)
Sharḥ manẓūmat Abī Zayd `Abd al-Raḥmān ibn Sheikh Abī Muḥammad `Abd al-Qādir al-Fāsī fī `ilm al-āla al-nujūmiyya al-ma`rūfa bi'l-asṭurlāb; Jerusalem (National and University, Yehuda 334/6)
Sharḥ Manẓūmat Abī'l-Muqri`; A5. of No 696
Sharḥ manẓūmat Fatḥ [al-wahhāb] fī `ilm al-ḥisāb li'l-Zamzamī; M1. 941
Sharḥ manẓūmat Shams al-Dīn Abī'l-Ṣalāḥ Muḥammad al-Qaṭarī `alā'l-Risāla al-Shihābiyya li Sibṭ al-Maridīnī; A1. of No 1228
Sharḥ al-maqāla al-`āshira min kitāb Uqlīdis = Tafsīr ṣadr al-maqāla al-`āshira min kitāb Uqlīdis; M1. of No 194
Sharḥ al-maqāla al-`āshira min kitāb Uqlīdis; M1.of No 193
Sharḥ al-maqāla al-`āshira min kitāb Uqlīdis; M3. of No 657
Sharḥ al-maqāla al-`āshira min Uṣūl Uqlīdis; M4. of No 1080
Sharḥ al-maqālāt al-arba` al-ūlā min Taḥrīr Uqlīdis li-Naṣīr al-Dīn al-Ṭūsī = Sharḥ min Taḥrīr Uqlīdis = Ilḥāq Abī Isḥāq `alā quṣūr al-bidā `a wa `adam al-istiḥqāq; M3. of No 833
Sharḥ Miftāḥ al-fā'id fī `ilm al-farā'iḍ; M2. of No 1124
Sharḥ-i Mir`āt-i Qushjī; Tehran (University 919)
Sharḥ misāḥat shabīh al-mu`ayyin; M7. of No 527
Sharḥ al-mufaṣṣal fi'l-`amal bi ṣurat al-mu`addal; A8. of No 842
Sharḥ al-Muḥaṣṣal; E1. of No 606
Sharḥ Mujmal al-Uṣūl; A1. of No 1080; A2. of No 688
Sharḥ mukhtaṣar Ibn al-Bannā; Istanbul (Süleymaniye, Laleli 2747)
Sharḥ al-Mukhtaṣar fī `ilm al-tanjīm li-Naṣīr al-Dīn al-Ṭūsī; Istanbul (Süleymaniye, Laleli 2706)
Sharḥ mukhtaṣar fi'l-Jabr wa'l-muqābala; Hyderabad (Salar Jung Riyad. 20)
Sharḥ mukhtaṣar al-Khwārizmī; M2. of No 604
Sharḥ-i Mukhtaṣar dar ma`rifat-i taqwīm li'l-Ṭūsī; St. Petersburg (Institute of Oriental Studies A 682)
Sharḥ Mukhtaṣar fī ma`rifat al-taqwīm; St. Petersburg (Institute of Oriental Studies A 1453)
Sharḥ al-mukhtaṣar al-mawsūm Sī faṣl fi'l-taqwīm; Baghdad (Ya`qub Sarkis 120/1)
Sharḥ mukhtaṣar `alā'l-muqaddima al-musammāt bi'l-Lum`a fī `ilm al-ḥisāb = Sharḥ al-Lum`a li-Ibn al-Hā'im; M1. of No 958
Sharḥ mukhtaṣar al-mukhtaṣar al-musammā Tuḥfat al-aḥbāb fī `ilm al-ḥisāb; M3. of No 1011
Sharḥ al-Mukhtaṣar li-Naṣīr al-Dīn al-Ṭūsī; Baku (Institute of Manuscripts B 337/3)
Sharḥ-i Mukhtaṣar-i Taqwīm-i Ṭūsī; Hyderabad (Osmania University 286)
Sharḥ (-i) (al-)Mulakhkhas; A1. of No 753; A3 of No 791; St. Petersburg (National 127.); Tehran (University 917.); A4. of No 694; A1. of No 0202; A2. of No 914; A2. of No 863; Manchester (Rylands 363.); A2. of No 805
Sharḥ Mulakhkhaṣ al-Jaghmīnī; A1. of No 738
Sharḥ al-muqaddama al-jabr wa'l-muqābala; M1. of No 054
Sharḥ muqaddima mukhtaṣara min ma`rifat a`māl istikhrāj al-layl wa'l-nahār; A1. of No 015
Sharḥ muqaddimat al-rub` al-mujayyab; Berlin (State 5827)
Sharḥ al-Muqni`; A2. of No 1260
Sharḥ al-Muqni` fī `ilm Abī Muqri`; A2. of No 1166; A1. of No 1358
Sharḥ al-Muqni` fi'l-jabr wa'l-muqābala li-Ibn al-Hā'im; M5. of No 873
Sharḥ Murshidat al-ṭālib; M1. of No 1050
Sharḥ muṣādarāt kitāb Uqlīdis fi'l-uṣūl; M2. of No 328
Sharḥ muṣādarāt Uqlīdis; M1. of No 535
Sharḥ al-mushkil min K. al-mūsīqā; Mu2. of No 420
Sharḥ al-mushkil min kitāb Uqlīdis fī nisba; M1. of No 145
Sharḥ al-Mutaqqina; M1. of No 078
Sharḥ `ala naẓm Abi Zayd al-Fāsī fi'l-asṭurlāb - min K. al-uqnūm; A1. of No 1361
Sharḥ li naẓm al-risāla al-Fatḥiyya fi'l-`amal al-jaybiyya; A1. of No 1031
M. fī sharḥ al-nisba; M1. of No 340

Sharḥ al-Nujūm al-shāriqāt fi'l-`amal bi rub` al-muqanṭarāt; A4. of No 1042
Sharḥ al-Nujūm al-Ẓāhirāt fi'l-`Amal bi Rub` al-Muqanṭarat; A3. of No 1111
Sharḥ al-Nuzha li Ibn al-Hā'im; M1. of No 1017
Sharḥ al-Nuzha; M1. of No 924
Sharḥ al-Nuzhat fi'l-a`dād; M1. of No 1392
Sharḥ Nuzhat al-nuẓẓār fi `ilm al-ghubār; Beirut (University of St.Joseph 234)
Sharḥ Nuzhat al-ṭullāb fi `ilm al-ḥisāb li Ibn al-Hā'im; M2. of No 1050
Sharḥ Nuzhat al-ṭullāb fi `ilm al-ḥisāb; M1. of No 1048
Sharḥ Nuzhat al-ṭullāb; M1. of No 905
M. fi sharḥ al-Qānūn `alā ṭarīq al-ta`līq; A30. of No 328
Sharḥ `alā qaṣida fi a`māl al-ḥisāb; M2. of No 0103
Sharḥ qaṣīda Abī `Alī ibn al-Haytham al-Baghdādī = Sharḥ al-qaṣīda al-`ayniyya fi ma`rifat al-Qibla wa'l-awqāt wa'l-ṭawāli`; A1. of No 483
Sharḥ Ra`f al-ḥijāb `an qawā`id al-ḥisāb; M2. of No 0141
Sharḥ al-Rahbiyya; M16. of No 873
Sharḥ Rāzī li'l-maqāma; A3. of No 535
Sharḥ risāla al-Bahā'iyya fi'l-ḥisāb; M1. of No 1303
Sharḥ al-risāla al-Bahā'iyya; M1. of No 1251
Sharh `alā risāla fi bayān al-`amal bi'l-āla allatī tusammā bi'l-rub` al-mujayyab; Princeton (Garr. 1021).
Sharḥ risāla-yi Bīst bāb dar asṭurlāb; Istanbul (Süleymaniye AS 2641)
Sharḥ Risāla al-daraja; A8. of No 1008
Sharḥ risāla-yi fatḥiyya = Sharḥ-i risāla-yi Qushjī dar falakiyyāt = Risāla-yi fārisiyya dar hay'at = Humāyūn-nāma; A1. of No 994
Sharḥ `alā'l-risāla al-Fatḥiyya fi'l-a`māl al-jaybiyya; Rabat (General 2514)
Sharḥ Risāla Fatḥiyya li-Badr al-Dīn Muḥammad Sibṭ al-Māridīnı; Hyderabad (Salar Jung Hay'a 23)
Sharḥ-i Risāla-yi Fatḥiyya; St. Petersburg (National 315/1)
Sharḥ al-risāla al-fatḥiya; A2. of No 940; Princeton (Yehuda 2666).; A1. of No 1008
Sharḥ-i Risāla-yi hay'at-i Qushjī; Aligarh (Azad Habib Ganj 44/1); Hyderabad (Central State Riyad. 142, 148, 507. = Aligarh Azad Habib 44/1); A1. of No 811
Sharḥ risāla fi'l-ḥisāb; St. Petersburg (Institute of Oriental D 347/1)
Sharḥ Risāla fi `ilm al-ḥisāb; Istanbul (Topkapı Sarayı 7013)
Sharḥ risāla Jamāl al-Dīn al-Māridīnī; Tripoli (Waqfs U 1181)
al-Sharḥ li'l-Risala al-manẓūma fi ma`rifat ikhrāj al-Qibla; A8. of No 813
Sharḥ al-risāla al-Māridīniyya fi'l-`amal bi'l-rub` al-mujayyab = Tawḍīḥ `alā'l-risāla al-Fatḥiyya fi'l-a`māl al-jaybiyya; A1. of No 1002; A2. of No 798
Sharḥ-i risāla-yi Mu`īniyya; A21. of No 606
Sharḥ risāla fi'l-rūb` al-mujayyab; A2. of No 885
Sharḥ Risāla fi Rub` al-Muqanṭarat; A2. of No 1331
Sharḥ al-risāla al-Shamsiyya; M1. of No 772
Sharḥ` al-risāla al-shamsiyya fi'l-ḥisāb; M1. of No 938
Sharḥ risāla fi tasāwī al-zawāyā al-thalāth li'l-Taftazānī; St. Petersburg (Institute of Oriental B 2164)
Sharḥ risālat `Aṭā'allāh al-`Ajamī fi rub` al-mujayyab; A2. of No 893
Sharḥ risālat al-Tajnīs fi'l-ḥisāb; M4. of No 1004
Sharḥ risālat Zīnūn al-kabīr; PH10. of No 180
Sharḥ (li-)al-rub` al-mujayyab; Tehran (University 913.); A1. of No 1342
Sharḥ-i rūz-namā-yi shuhūr-i sham-siyya; (Vienna 354)
Sharḥ ṣadr al-maqāla al-ūlā min kitāb Uqlīdis li-Abī Naṣr Muḥammad ibn Muḥammad al-Fārābī= Sharḥ Ṣadr al-maqāla al-khāmisa minhu li-Abī Naṣr ayḍan= Sharḥ al-mustaghlaq min muṣādarāt al-maqāla al-ūlā wa'l-khāmisa min Uqlīdis; M1. of No 180
al-Sharḥ al-shāfi `alā al-kitāb al-Kāfi fi'l-ḥisāb; M1. of No 474
Sharḥ al-Shāfiyya; M2. of No 686
Sharḥ Shams al-hay'a; A12. of No 972
Sharḥ al-Shamsiyya fi'l-ḥisāb; M1. of No 950
Sharḥ al-Shamsiyya; M1. of No 970
(K.)Sharḥ Sī faṣl; Baku (Institute of Manuscripts M 65/1); Istanbul (Süleymaniye, Fatih 3420); Tehran (University 916.); A1.of No 876; A1 of No 791; A2. of No 1079; A4. of No 686; A5. of No 833; A1. of No 0107; London (British Pers. 7858/1, 11137/2); Tehran (Majlis 1006/1, 3186/2); Tehran (University 303/2, 889, 4525); London (British 395/1)
Sharḥ al-Sirājiyya; M1. of No 1257
Sharḥ ṣudūr maqālāt Uqlīdis; M2. of No 224
Sharḥ al-Tabṣira; A3. of No 694
Sharḥ Tadhkira = Tawḍīḥ al-Tadhkira; A3. of No 686
Sharḥ al-Tadhkira; A1. of No 0228.; A3 of No 808: St. Petersburg (National Khanykov 123). Tehran (University 906); Calcutta (Asiatic Society of Bengal 1501)
Sharḥ al-Tadhkira al-Naṣīriyya; A1. of No 788; A9. of No 938
Sharḥ al-Tadhkira fi'l-hay'a; Manchester (Rylands 365)

Sharḥ Ta`dīl al-`ulūm; E2. of No 706
Sharḥ Taḥrīr al-Majisṭī; A7. of No 938; A2. of No 686; A1. of No 171; Berlin (State 5636)
Sharḥ Taḥrīr kitāb al-ukar li Thaudhusyūs; M8. of No 1080
Sharḥ Taḥrīr Uqlīdis; M1. of No 1114; Istanbul (Beyazıt State, Veliyuddin 2322); M1. of No 0217
Sharḥ taḥrīr uṣūl al-handasa wa'l-ḥisāb; M1. of No 1401
Sharḥ Taḥrīr Uṣūl Uqlādis; M2. of No 549; M6 of No 1080
Sharḥ al-Talkhīs; M1. 660; M1. of No 781
Sharḥ talkhīṣ al-asṭurlāb; A3. of No 609
Sharḥ talkhīṣ al-Miftāḥ; M1. of No 1318
Sharḥ talkhīṣ Ibn al-Bannā; M1. of No 793; M7. of No 865
Sharḥ tarjama `arabiyya li Fuṣūl Khawāja al-Ṭūsī; A1.of No 0253
Sharḥ Tashrīḥ al-aflāk; A1. of No 1153; A1. of No 1179; A1. of No 1226; A1. of No 1289; A1. of No 1300; A1. of No 1363; A2. of No 1171; Mashhad (University 323); A1. of No 037; A2. of No 1178; A1. of No 1308; A1. of No 1309; A1. of No 1311
Sharh Tuḥfa al-ah'bāb; M1. of No 999
Sharḥ Tuḥfa fi'l-hay'a; A1. of No 1378
Sharḥ al-Tuḥfa al-Shāhiyya fī al-Hay'a; A11. of No 845
Sharḥ Uqlīdis; Hyderabad (Central State Riyad. 2); Hyderabad (Osmania University 375. = Hyderabad riyad. 2); M1. of No 219; M1. of No 9
Sharḥ Urjūza fī ḥall al-a`dād; M4. of No 1340
Sharḥ urjūza fī ḥisāb al-yad; M4. of No 1026
Sharḥ Urjuza fi'l-ḥisāb li `Ali ibn Abī al-Rijāl al-Qayrawānī; M3. of No 780
Sharḥ `alā Urjūza fī waṣf al-manāzil; Rabat (General 2521)
Sharḥ al-Urjūza al-Yāsamīniyya; M8. of No 865
Sharḥ al-Uṣūl li-Uqlīdis fi'l-handasa wa'l-`adad; M1. of No 327
Sharḥ Uṣūl Uqlīdis; M3. of No 224
Sharḥ Uyūn al-ḥikma; PH1. of No 0159; PH4. of No 535
Sharḥ Waraqāt al-Māridīnī fī awqāt al-ṣalāt; Tripoli (Waqfs U 1101/4)
Sharḥ al-Wasīla = al-Zahra al-jalīla fī ḥall alfāẓ al-Wasīla; M1. of No 787
Sharḥ al-Wiqāya fi'l-mīqāt; A7. of No 1063
Sharḥ al-Yāsamīniyya = K. al-durr al-thamīn fī sharḥ Urjūzat Ibn al-Yasmīn; M13. of No 783
Sharḥ al-Yāsamīniyya; M9. of No 873; M2. of No 782; Patna (Bankipore 2427); M1. of No 0106
Sharḥ Zawāyā fi'l-masā'i al-handasiyya; Baku (Institute of Manuscripts B 4007, 4093/3)
Sharḥ-i Zīj-i amīr-i kabīr Ulugh Beg; A1. of No 1010
Sharḥ-i zīj-i Guragānī; Mashhad (University 333)
Sharḥ-i zīj-i īlkhānī; A3. of No 833; Aligarh (Azad Habib Ganj 44/19)
Sharḥ-i zīj-i īlkhānī li'l-Ṭūsī; A11. of No 940
Sharḥ-i Zīj-i Khāqanı; A13. of No 938
Sharḥ zīj al-Khwārizmī; A1. of No 193
Sharḥ-i Zīj-i Muḥammad-Shāhı; A8. of No 1181
Sharḥ-i Zīj-i Niẓāmı; A2. of No 1264
Sharḥ Zīj Sanjaqdārı; A1. of No 1242; A2. of No 1337
Sharḥ al-Zīj al-shāmil; A1. of No 766
Sharḥ-i Zīj-i Ulugh Beg; A3. of No 845; A2. of No 1259; A8. of No 938
al-Sharīda ilā dhikr shuhūr al-Rūm; A1. of No 886
al-Sharīfa; A6. of No 1063
R. sharīfa fi'l-`amal bi'l-kura dhāt al-kursī; Cairo (Zaki 782/8)
Sharīfiyya; M3. of No 938
Shash `amal-i farā'iḍ = Waṣiyyat bar chahār qism; M5. of No 1198
Shasḥ al-Mukhtaṣar fī ma`rifat al-taqāwīm; Princeton (Garr. 1019)
Shay' min al-tawārīkh wa'l-a`māl al-falakiyya; Fas (Zawiya 10c)
M. al-Sheikh al-Ra'īs; PH16. of No 317
K. al-shifā'; E1. of No 317
Shifā' al-askām fī waḍ` al-sā`at `alā'l-rukhām; A1. of No 659
Shifā' al-nafs; E1. of No 555
Shifā' al-ṣudūr fī `amal al-mīzān al-maḥfūr; A5. of No 695
al-R. al-Shihābiyya fi'l-a`māl al-jaybiyya; A1. of No 1227
Dar shinākhtan-i chigūnagī-yi sanjīdan-i zamīnhā wa makānhā; Paris (Pers. 772/8)
K. al-shi`r; L1. of No 180
K. al-shi`r wa'l-shu`arā; L1. of No 94
al-Shi`rā al-yamaniyya; Damascus al-Zahiriyya 3105)
Shi`rhā; L2. of No 317
K. al-shu`ā`; APh1. of No 144
Shu`ā`; Tehran (Malik 6188/21)
al-Shu`ā`āt al-shamsiyya; Ph2. of No 79
al-Shubbāk; M19. of No 783
K. fī shuhūb; A3. of No 77
Shujā`-i Ḥaydar; AG1. of No 158
M. fi'l-shukūk `alā Baṭlamyūs; A13. of No 328
K. shukūk `alā kitāb Uqlīdis; M6. of No 118
Shukūk al-Majisṭī; A8. of No 205
Shumār-nāma; M1. of No 301
Sī faṣl; A1. of No 0230
Sī faṣl dar ma`rifat-i taqwīm; A16. of No 606
Sidrat muntahā al-afkār fī malakūt al-falak al-dawwār; A5. of No 1004

Şifa al-`amal bi'l-ḥalaq; A2. of No 128
R. fi şifat al-`amal bi'l-rub` al-mujayyab; A7. of No 737
R. fi şifāt al-arḍ wa'l-samā' wa'l-nabātāt; AG1. of No 30
M. fi şifat asbāb al-sukhūna al-mawjūda fi'l-`ālam wa ikhtilāf fuşūl al-sana; Ph3 of No 348
M. fi şifat al-ashkāl allatī taḥduthu bi-mamarr ṭaraf ẓill al-miqyās fi saṭḥ al-`ufq fi kull yawm wa fi kull balad; A3. of No 103
(Fi)Şifat al-asṭurlāb; A12. of No 299; A6. of No 348
Şifat Jazīrat al-`Arab; G1. of No 173
R. dar sifat-i kura; A1. of No 058
R. dar şifat-i kura-yi jadīd; A1. of No 329
Şifat takhṭīṭ al-rukhāma; Fas (Zawiya 9i)
K. fi şifat al-wazn wa ikhtilāfihi; Me1. of No 103
K. al-şila fi akhbār a'immat al-Andalus; HS1. of No 492
Şilat ta'rīkh al-Ṭabarī; H1. of No 249
Silk al-Durrayn fi Hall al-Nayyirayn; A5. of No 955; A1. of No 955
.Silk farā'id al-yawāqīt fi'l-ḥisāb wa'l-farā'iḍ wa'l-mawāqīt; M1.of No 1159
Şinā`a al-ḥisāb; M12. of No 309
K. fi şinā`a al-sā`āt bi-qiyās al-ẓill; Princeton (Yehuda 373b)
K. fi'l-şinā`a al-`uẓma; A1. of No 79
R. fi şinā`at Baṭlamyūs al-falakiyya; A14. of No 79
R. fi şinā`at al-hawā; M3. of No 783
R. fi şinā`at istikhrāj al-taqwīm; A1. of No 1143; A6. of No 1143
M. fi şinā`at al-manṭiq; PH2 of No 534
Fi şinā`at al-mūsīqa; St. Petersburg (National Khanykov 144/2)
K. al-sīra al-falsafiyya; PH1. of No 142
al-Sirāj al-anwar fi kayfiyyat al-`amal bi'l-rub` al-muqanṭar; A2. of No 1389
al-Sirāj fi `ilm al-falak; A1. of No 984
Sirāj al-istikhrāj; A2. of No 1092
Sirāj al-tawḥīd al-bāhij al-nūr; A1. of No 739
al-Sirāj al-wahhāj fi `amal al-azyāj; A1. of No1156; A2. of No 1256
al-Sirāṭ al-mustaqīm; A1. of No 617
al-Şirāṭ al-mustaqīm fi ḥall muqawwamāt al-qamar min al-Durr al-yatīm; A27. of No 888
al-Sirāṭ al-mustaqīm fi istikhrāj samt al-qibla bi'l-dā'ira al-hindiyya; A1. of No 1265
K. al-sirr; A11. of No 88
Sirr al-`ālamayn fi'l-hay'a; A7. of No 194
K. sirr al-asrār; Ch2. of No 142
al-Sirr al-maktūm fi mukhāṭabat al-nujūm; A1. of No 535
al-Sirr al-maktūm fi'l-`amal bi'l-zīj al-manẓūm; A1. of No 680
al-Sirr al-maşūn fi'l-Durr al-maknūn; A7. of No 856
K. fi sitta wa `ishrīna shakl min al-maqāla al-ūlā min Uqlīdis allati lā yuḥtāju fi shay` minhā ilā al-khulf; M3. of No 82
Siyāḥat-nāma= Ta'rīkh-i sayyāḥ; G1. of No 1167
Siyāḥat-nāma-yi asṭurlāb rub` mujayyab `amal bi'l-jayb muqanṭarāt dā'ira al-mu`addal dhāt al-kursī; A4. of No 977
(K.) (R.) (-yi) (dar) (al-)siyāq; M1. of No 088; M1. of No 0201; M2. of No 0187; Bombay (Asiatic Society 29); Tehran (Majlis 131/2, 2418/2,3); Tehran (University Ilah. 99/7); M1. of No 0130; Hyderabad (Central State Jadid 2669, riyad. 317-320. = Aligarh Azad. Shafta 209); Aligarh (Azad Shafta 209)
K. al-siyāsāt al-madaniyya; PH8. of No 180
Sual wa jawāb-i falakı; A2. of No 994
R. fi Suhayl; A3. of No 169
al-R. al-şughrā; PH1. of No 788
Sullāqā Hawnānāya; A1. of No 633
Sullam al-`urūj ilā `ilm al-manāzil wa'l-burūj; A1.of No 1368
Sullam al-ḥisāb; M1. of No 1319
Sullam al-mināra fi muqawwamāt al-kawākib al-sayāra; A16. of No 888
Sullam al-samā fi ḥall ishkāl waqa`a li'l-muqaddimīn fi'l-ab`ād wa'l-ajrām; A4. of No 802
Sullam al-samā' wa'l-āfāq fi'l-rub` al-mujayyab; A2. of No 1250
K. fi sukūn al-arḍ aw ḥarakatihā; A2. of No 285
K. al-sumūm; ME1. of No 534
K. al-sumūm wa raf` maḍārrihā; ME1. of No 9
al-Sundusa fi ma`rifat ḥişaş al-awqāt bi'l-handasa; A3. of No 1074
K. şurat al-arḍ; G1. of No 103
K. Şūrat al-arḍ min al-mudun wa'l-jibāl wa'l-biḥār wa'l-jazā'ir wa'l-anhar istakhrajahū Abū Ja`far al-Muḥammad al-Khwārizmī min kitāb al-Jughrāfiya alladhī allafahu Baṭlamyūs al-Kalawdhī; G1. of No 41
K. şunūf al-ḍarb wa'l-qisma; M3. of No 236
Şurat su'āl wa jawāb tata`allaq bi ma`rifat mawāqīt al-şalāt; A37. of No 873
Şurat ṭāli`i wilādat al-Qāḍī Muḥammad al-`Ibādī Sanat 917; A13 of No 1018
R.-yi surī`a fi al-kursī al-şinā`ı = R. fi'l-`amal bi dhāt al-kursī; A1. of No 990
Suṭūr fi'l-ḥisāb; Tbilisi (L 29, 137)
R. fi'l-şuwar; A13. of No 79
Şuwar al-aqālīm; G1. of No 156
Şuwar al-kawākib; Mashhad (Mawlawi 87/3)

K. ṣuwar al-kawākib al-thābita; A1. of No 212
Suwar aflāk al-shams wa'l-qamar wa'l-Zuhra wa `Uṭārid ma`a sharḥihā; St. Petersburg (Institute of Oriental Studies B 1172)
(R.) (fī) ṣuwar al-kawākib; A2. of No 1105; Bombay (Asiatic Society 56)
M. fī ṣuwar al-kusūf; Ph8. of No 328

-T-

K. fī'l-ta'attī li-istikhrāj al-a`mal al-handasiyya; M13. No 103
K. ṭabī`at al-`adad; M6. of No 310
(R.)(K.)(-yi) (fī)(al-)Ṭabī`iyyat; Hyderabad (Central State Riyad. 159); (Vatican 879.); Ph1. of No 317; Ph1. of No 226; Ph1. 0165
Ṭabī`iyyāt min `uyūn al-ḥikma; Ph2. of No 317
M. fī ta`bīr al-mīzān li-taqdīr al-azmān; A50. of No 348
Ta`bīr al-ru'ya; PH15. of No 317
Ta`bīr al-Taḥrīr; Mashhad (Imam Riza 28)
Tabṣīr fī'l-nujūm; A1. of No 0278
al-Tabṣira fī'l-hay'a; Istanbul (Süleymaniye, Fatih 3385)
al-Tabṣira fī `ilm al-hay'a; A2. of No 469
al-Tabṣira fī `ilm al-ḥisāb; M18. of No 865; M4. of No 487
K. al-tabṣira fī `ilm al-nujūm; A1. of No 685
Tabṣira al-mubtadī wa tadhkira al-muntahī fī ma`rifat al-awqāt bi'l-ḥisāb min ghayr āla wa lā kitāb; A1. of No 060
Tabṣira ulā al-albāb fī `ilm al-ḥisāb; St. Petersburg (National Khanykov 128/3)
al-Tabṣira al-wāḍiḥa fī masa'il al-a`dād al-lā'iḥa; M15. of No 865
Tabṣirat al-ikhwān; Tashkent (Institute for Oriental Studies 2526); A11. of No 1176
Tabṣirat al-mubtadī bi'l-qalam al-hindī; M4. of No 865
Tabyīn al-Awqāt; A16. of No 933
M. fī tabyīn anna kull muttaṣil innamā yanqasim ilā munqasim wa ghayr mumkin an yanqasima ilā mā lā yanqasim; M1. of No 198
K. taḍā`īf buyūt al-shaṭranj; M3. of No 225
K. al-tadbīr = R. fī ḥarakāt al-kawākib al-sayyāra wa tadbīrihā; A4. of No 402
Tadbīr al-iksīr al-a`ẓam; Ch2. of No 9
K. tadbīr al-khawāṣṣ fī tadwīr al-aḥwāḍ; M1. of No 426
Tadbīr al-manāzil; PH13. of No 317
K. tadbīr al-mutawaḥḥid; PH1. of No 436
Tadhkira al-albāb fī ṣifa `amal al-asṭurlāb; Baku (Institute of Manuscripts B 4791/7)
Tadhkira fī `ilm al-hay'a; St. Petersburg (University 1079)
al-Tadhkira al-Harawiyya fī ḥiyal al-ḥarbiyya; Me1. of No 543
al-Tadhkira fī'l-hay'a; A2. of No 655
Tadhkira fī'l-ḥisāb wa'l-`add bi-arqām al-Sind wa'l-Hind; M10. of No 348
Tadhkira fī ma`rifat ajzā' al-asṭurlāb al-shimālī; Escorial (St.Laurentius Monastery II 972/1)
Tadhkira fī'l-misāḥa li'l-Musāfir al-Muqawwı; M16. of No 348
Tadhkira al-nāsī fī'l-rub` al-āsī; A1.of No 867
al-Tadhkira al-Naṣīriyya fī `ilm al-hay'a; A10. of No 606
Tadhkira ulā'l-albāb wa'l-jāmi` li'l-`ajab al-`ujāb; ME1. of No 1044
Tadhkirat al-aḥbāb fī'l-`amal bi'l-asṭurlāb; A4. of No 1285
Tadhkirat al-aḥbāb fī bayān al-taḥābb = R. fī istikhrāj al-a`dād al-mutaḥabba; M1. of No 674; M2. of No 938
Tadhkirat dhawī al-albāb fī istīfā' al-`amal bi'l-asṭurlāb; A1. of No 757
Tadhkirat al-kuttāb fī `ilm al-ḥisāb; M1. of No 983
Tadhkirat man nasiya; M1. of No 980
Ta`dīd shukūk talzamu maqālat Arisṭuṭālis fī'l-baṣar wa ta`dīd shukūk fī kawākib al-dhanab; APh1. of No 306
R. fī taḍ`īf al-madhbaḥ; M1. of No 869
R.-yi taḍ`īfiyya; M2. of No 833
Ta`dīl hay'at al-aflāk; A1. of No 706
K. ta`dīl al-kawākib; A2. of No 108
Ta`dīl-i mu'addal-i qamar; Tehran (Sipahsalar 622, 683); Tehran (University 261. = Tehran (Sipahsalar 622, 683); A2. of No 939)
Ta`dīl al-`ulūm; E1. of No 706
Tadrīb al-`āmil bi'l-rub` al-kāmil; A26. of No 873
R. fīmā tafarra`a `an al-shakl al-qaṭṭā` min al-nisab al-mu'allafa `alā sabīl al-ījāz; M5. of No 635
K. al-tafhīm li-awā'il ṣinā`at al-tanjīm; A2. of No 348; A3. of No 348
al-Tafhīm dar ma`rifat-i istikhrāj-i taqwīm; A3. of No 1010
Tafrīḥ al-idrāk fī Tawḍīḥ al-aflāk; A1. of No 1307
Tafṣīl al-taqwīm fī sharḥ Hidāyat al-tanjīm; A3. of No 1285
K. tafṣīl al-zamān wa maṣāliḥ al-abdān; A2. of No 250
Tafsīr al-arithmāṭiqā; M4. of No 219
Tafsīr āyāt al-dukhān; Ph10. of No 317
Tafsīr-i āyāt-i farāiḍ al-Madārik; Tashkent (Institute for Oriental Studies 2245/1)
Tafsīr Ba`ḍ al-ālāt al-Raṣadiyya; A25. of No 1004
K. tafsīr dhāt al-ḥalaq alladhī dhakarahū Thāwun al-Iskandarānī; Istanbul (Topkapı Sarayı 3505/6)

K. tafsīr kitāb Diyūfanṭus fi'l-jabr = K. al-barāhīn `alā'l-qaḍāyā allatī ista`malahā Diyūfanṭus; M11. of No 256
K. tafsīr kitāb Ibarkhus fi'l-jabr; M12. of No 256
K. tafsīr kitāb al-Khwārizmī fi'l-jabr wa'l-muqābala; M10. of No 256
K. tafsīr kitāb Uqlīdis; M13. of No 256; M3. of No 43
Tafsīr al-Majisṭī; A1. of No 35
Tafsīr al-maqāla al-`āshira; M1. of No 57
Tafsīr al-maqāla al-`āshira li kitāb Uqlīdis; M5. of No 229
Tafsīr al-maqāla al-`āshira min kitāb Uqlīdis; M2. of No 82
Tafsīr mukhtaṣar Majisṭī; A1.of No 0133
R. fī tafsīr qawlihī ta`ālā li dulūk al-shams wa ṭarīqat ma`rifat waqt al-zawāl wa samt al-Qibla bi'l-adilla al-handasiyya; A3. of No 1063
K. tafsīr ṣuwar K. al-samā' wa'l-`ālam li-Abī Ja`far al-Khāzin; A1. of No 156
Tafsīr Taḥrīr al-Majisṭī; Manchester (Rylands 367)
Tafsīrāt li-thalāth maqālāt wa niṣf min kitāb Diyūfanṭus fi'l-masāil al-`adadiyya; M3. of No 118
K. tahāfut al-falāsifa; PH1. of No 415
Tahāfut qawl Ibn al-Haytham fi'l-makān; M2. of No 568
Tahāfut al-tahāfut; PH1. of No 512
Taḥbīr inkishāf al-labs fī taḥrīr inkisāf al-shams; A1. of No 1202
M. fi'l-taḥlīl wa'l-tarkīb; M5. of No 328
M. fi'l-taḥlīl wa'l-taqṭī` li'l-ta`dīl; A17. of No 348
K. tahdhīb al-aqwāl fī taṣḥīḥ al-`urūḍ wā'l-aṭwāl; G6 of No 348
Tahdhīb fuṣūl al-Farghānī; A26. of No 348
Tahdhīb makhrūṭāt Abulūniyūs = Sharḥ kitāb Abulūniyūs fi'l-makhrūṭāt; M2. of No 635
Tahdhīb al-manṭiq wa'l-kalām; PH2. of No 772
Tahdhīb maqālat Thawdhūsyūs fi'l-ukar; M4. of No 635
Tahdhīb shurūṭ al-`amal li-taṣḥīḥ sumūt al-qibal; G14. of No 348
K. al-tahdhīb fī ṣinā`at al-nujūm; A2. of No 487
Tahdhīb al-ta`ālīm; M9. of No 299
Tahdhīb zīj al-Arkand; A32. of No 348
Tahdhīb Zīj al-Battānī; A2. of No 315
Taḥdīd al-ma`mūra wa taṣḥīḥuhā fi'l-ṣura; G19. of No 348
K. taḥdīd nihāyāt al-amākin li-taṣḥīḥ masāfāt al-masākin; G3. of No 348
K. al-taḥlīl; PH9. of No 180
K. fī taḥlīl al-masā'il al-`adadiyya bi-jihat al-jabr wa'l-muqābala mubarhanan; M5. of No 327
K. fī taḥlīl al-masā'il al-handasiyya; M4. of No 327
R. fi'l-taḥlīl wa'l-tarkīb; M8. of No 487
K. fi'l-taḥlīl wa'l-tarkīb al-handasiyyayn `alā jihat al-tamthīl li'l-muta`allimīn; M12. of No 327
R. taḥqīq-i ajzā`-i jism; M1. of No 1298
Taḥqīq al-awzān; Me1. of No 012
R. dar taḥqīq-i ayyām wa rūzhā-yi mubārak u mas`ūd u manḥūs; A3. of No 1262
R. dar taḥqīq-i dā'ira-yi hindı; A1. of No 1201
R. fī taḥqīq al-ḥaraka; Me1. of No 0235
R. fī taḥqīq al-hayūla; Ph1. of No 074
R. fī taḥqīq khaṭṭ al-ṣubḥ wa'l-shafaq; A3. of No 994
R. fī taḥqiq al-kura; A13. of No 1058
Taḥqīq mabādī' al-handasa; M3. of No 317
K. fī taḥqīq manāzil al-qamar; A29. of No 348
Taḥqīq mas'ala min al-maqāla ūlā min al-fann al-awwal fi'l-mūsīqā; Mu4. of No 180
(R.) (fī) (dar) taḥqīq-i samt-i Qibla; A1. of No 1088; Calcutta (Asiatic Society of Bengal Curz. 400); A3. of No 940; A1. of No 1334
R. dar taḥqīq-i sana; A2. of No 1410
R. fī taḥqīq al-wujūd; PH2. of No 788
R. fī taḥqīq al-zāwiya; M4. of No 317; (Hajiyat 116/4)
R. `alā taḥrīr al-Abharī fi'l-mas'ala al-mashhūra min kitāb Uqlīdis; M4. of No 674
Taḥrīr-i ashkāl al-ḥall sharḥ-i Ashkāl al-ta'sīs li'l-Ṭūsī; M3. of No 1259
K. fī taḥrīr mā li'l-Hind min maqāla maqbūla fi'l-`akl aw mardhūla; E2. of No 348
Taḥrīr istikhrāj al-awtār li'l-Bīrūnī; M4. of No 1348
Taḥrīr kitāb al-Ayām wa'l-layālī li Thawdhūsyūs; A5. of No 606
Taḥrīr kitāb fī jirmay al-nayyirayn wa'l-bu`d baynahumā li Arisṭarkhus; A4. of No 606
Taḥrīr kitāb al-kura al-mutaḥarrika li Uṭūluqus; M6. of No 606
Taḥrīr K. al-kura wa'l-usṭuwāna li Arshimīdis; M4. of No 606
Taḥrīr K. al-kuriyyāt li Mā-nālāwus; M8. of No 606
Taḥrīr K. al-Mafrūḍāt li Thābit ibn Qurra; M10. of No 606
Taḥrīr K. al-mafrūḍāt; M6. of No 103
Taḥrīr K. al-Makhrūṭāt li Abulūniyūs; M11. of No 606
Taḥrīr K. al-ma'khūdhāt li Arshimīdis; M5. of No 606
Taḥrīr kitāb al-Manāẓir li Uqlīdis; Ph1. of No 606
Taḥrīr kitāb al-Masākin li Thawdhūsyūs; A6. of No 606
Taḥrīr K. ma`rifa misāḥa al-ashkāl al-basīṭa wa'l-kurriyya li Banū Mūsā; M9. of No 606
Taḥrīr kitāb fi'l-Maṭāli' li Ibsiqlāus; A7. of No 606
Taḥrīr K. al-mu`ṭayāt li-Uqlīdis; M2. of No 606
Taḥrīr K. taksīr al-dā'ira li Arshimīdis; M3. of No 606
Taḥrīr kitāb al-ṭulū` wa'l-ghurūb li Uṭūluqus; A3. of No 606

Taḥrīr K. al-ukar li Thawdhūsyūs; M7. of No 606
Taḥrīr K. al-ukar li-Thawudhūsiyūs; M5. of No 1004
Taḥrīr K. uṣul al-handasa li-Uqlīdis = Taḥrīr Uṣul Uqlīdis = Taḥrīr Uqlīdis fī `ilm al-handasa; M1. of No 606
Taḥrīr kitāb Ẓāhirāt al-falak li Uqlīdis; A2. of No 606
Taḥrīr al-Majisṭī; A1. of No 606
Taḥrīr al-Manāzil al-Qamariyya wa Anwā'iha wa Ṭulū` al-Kawākib al-Thābita bi al-Fajr; A18. of No 1017
Taḥrīr manāẓir al-Uqlīdis; Ph1. of No 1291
Taḥrīr al-maqāl fī ma`rifat `amal al-ḥilāl; A14. of No 1018
Taḥrīr maqāla fī ṣuwar al-kusūf; Ph4. of No 674
Taḥrīr maqāla fī'l-kura al-muḥriqa; Ph5. of No 674
Taḥrīr maqālat Thābit ibn Qurra fī quṭū` al-usṭuwāna wa basīṭihā; M1. of No 664
Taḥrīr al-mawāqīt; A1. of No 1357
Taḥrīr al-Ṣadr; M1. of No 1266
Taḥrīr al-Taḥrīr; M1. of No 972
Taḥrīr Uqlīdis fī ashkāl al-handasa; M1. of No 635
Taḥrīr Uqlīdis li-Thābit; M2. of No 103
Taḥrīr Uqlīdis; M1. of No 549
Taḥrīr Uqlīdis manẓūm; Hyderabad (Central State Riyad. 808)
K. taḥrīr Uṣūl Uqlīdis min ta`līf Khwāja Naṣīr al-Dīn al-Ṭūsī; M1. of No 610
Taḥrīr al-Uṣūl li Uqlīdis; M1. of No 295
Taḥrīr al-Wuṣūl ilā Nihāyat al-Su'l; A11. of No 983
Fī taḥṣīl al-ān min al-zamān `inda al-Hind; A51. of No 348
Taḥṣīl al-intifā` wa ghāyat al-irtifā` fī waḍ` al-maqāyīs wa waḍ` al-arbā`; A1. of No 1126
R. fī taḥṣīl īqā` al-nisba al-mu`allafa al-ithnay `ashara fī'l-shakl al-qaṭṭā ` al-musaṭṭaḥ; M7. of No 296
Taḥṣīl al-qawānīn al-handasiyya al-maḥdūda; M19. of No 296
(R.)(K.) taḥṣīl al-sa`āda; PH8. of No 180; PH15. of No 317
M. fī taḥṣīl al-shu`ā `āt bi-ab`ād al-ṭuruq `an al-sā`āt; Ph2. of No 348
al-Taḥṣīlāt; E1. of No 376
R. fī taḥwīl al-mu`āmila; M1. of No 1391
K. al-tāj fī akhlāq al-mulūk; PH3. of No 76
Tāj al-azyāj wa ghunyat al-muḥtāj; A1. of No 635
Tāj al-madākhil; A1. of No 416
Tāj al-tarājim fī ṭabaqāt al-ḥanafiyya; H1. of No 846
K. al-tajnīs fī'l-ḥisāb; M2. of No 527
Tajrīd al-shu`ā `āt wa'l-anwār `an faḍā'iḥ al-mudawwana fī'l-asfār; Ph1. of No 348
Tajrīd Uqlīdis = Tajrīd fī uṣūl al-handasa; M1.of No 341
Tajrīd Uqlīdis fī'l-manāẓir; Ph1. of No 664
Tajrīd uṣūl tarkīb al-juyūb; M1. of No 137
Tajrīd uṣūl tarkīb al-juyūb; M3. of No 308
Takhbīr al-aḥbāb fī'l-ḍarūrī min `ilm al-asṭurlāb; A7. of No 750
al-Takhlīṣ fī sharḥ al-Talkhīs; M2. of No 780
Takhlīṣ a`māl al-ḥisāb; M4. of No 696
Takhṣīṣ ūli al-albāb fī sharḥ Talkhīṣ a`māl al-ḥisāb; M1. of No 998
Takhṭīṭ al-sā`āt; A1.of No 189
K. al-takht; M2. of No 229
K. al-takht al-kabīr fī'l-ḥisāb al-hindī; M2. of No 219
K. al-takht fī ḥisāb al-hind(i); M2. of No 97; M2. of No 231; M1. of No 264
K. takhṭīṭ al-sā`āt wa inḥirāf al-ḥīṭān wa'l-ẓilālāt wa ab`ād al-sumūt; A1.of No 85
Takmīl ṣinā`at al-tasṭīḥ; M20. of No 348
Takmīl zīj Ḥabash bi'l-`ilal wa tahdhīb a`mālihī min al-zalal; A44. of No 348
Takmila-ya Majisṭī; A2. of No 963
al-Takmila fī sharḥ al-Tadhkira; Tehran (Majlis 164-165)
al-Takmila fī sharḥ al-Tadhkira; A1. of No 936
K. al-takmila fī `ilm al-ḥisāb; M1. of No 320
Takmilat al-Tadhkira li Naṣīr al-Dīn al-Ṭūsī; A1. of No 705
K. takmilat al-Ṣila; HS1. of No 590
(K.) (fī') al-Taksīr; M2. of No 246; M9. of No 696
R. dar taksīrāt wa a`dād-i wafq; Tashkent (Institute for Oriental Studies 2908/17)
Talāfī `awāriḍ al-zallāt fī K. dalā'il al-Qibla; G17. of No 348
M. fī ṭāli` qubbat al-arḍ wa ḥālāt al-thawābit dhawāt al-`urūḍ; A27. of No 348
Ṭāli`-i mawlūd; A2. of No 870
R. fī ta`līf al-a`dād; M17. of No 79
Ta`līf fī'l-ashkāl al-handasiyya; Rabat (General 2442)
Ta`līf fī fann al-taksīr; Rabat (General 2444)
Ta'līf fī istikhrāj al-awqāt min ghayr āla; Fas (Zawiya 10b)
K. fī ta`līf al-nisib = R. ilā l-muta`allimīn fī'l-nisba al-mu'allafa; M8. of No 103
Ta'līf fī'l-taksīr; M1. of No 670
Ta'līf fī tarḥīl al-durārī ilā ghayr dhālika mimmā huwa `ilm al-tawqīt; Fas (Zawiya 2g)
Ta`līl fī'l-zīj al-Khwārizmī; A9. of No 67; A2. of No 287
Ta`līq `allaqahū Isḥāq ibn Yūnis al-Mutaṭabbib bi-Miṣr `an Ibn al-Haytham fī kitāb Diyufanṭus fī masā'il al-jabr; M51. of No 328
Ta`līq `alā kitāb Baṭlamyūs fī tasṭīḥ basīṭ al-kura; M1. of No 281
Ta`līq `alā Manẓūma fī ḥisāb al-yad; M1. of No 021

Ta`līq `alā kitāb al-Tabṣira li'l-Kharaqī; Escorial (St.Laurentius Monastery II 955/2)
Ta`līm al-awqāt; Princeton (Yehuda 2946a)
Ta`līm-i farāiḍ; Dushanbe (Ferdowsi 932/1, 2043/1 = Dushanbe IOS 3091/1); Dushanbe (Institute of Oriental Studies 3091/1); M4. of No 706
al-Ta`līm al-thānī; E1. of No 180
K. al-ta`līm fī waḍ` al-taqwīm; A2. of No 800
Ta`līqāt; PH6. of No 180
Ta`līqāt `alā'l-Asṭurlāb; A15. of No 1058
Ta`līqāt `alā K. al-ukar li Thāwudhūsyūs; St. Petersburg (National Khanykov 144/10)
Ta`līqāt handasiyya; M32. of No 296
Ta`līqāt wa taḥqīqāt `alā'l-bāb al-thānī min Khulāṣat al-ḥisāb; St. Petersburg (Institute of Oriental C 1012/6)
Ta`līqāt dar sharḥ-i Mulakhkhaṣ; A12. of No 938
al-Ta`līqāt `alā sharḥ Mulakhkhaṣ al-Jaghmīnī; A2. of No 1179
K. talkhīṣ al-a`māl fī ru'yat al-hilāl; A3. of No 592
Talkhīṣ fī a`māl al-ḥisāb; M1. of No 596; M1.of No 696
M. fī talkhīṣ mā 'atā bihī Arisṭuṭālis fī mā ba'd al-ṭabī`a; PH2. of No 103
Talkhīṣ al-farāiḍ; M2. of No 545
Talkhīṣ al-hay'a; A1. of No 415
Talkhīṣ Hay`a mujassam; A5. of No 845
Talkhīṣ al-ḥisāb; M1. of No 392
Talkhīṣ al-`ibārāt wa īḍā ḥ al-ishārāt dhawāt al-asmā' wa'l-munfaṣilāt; M1. of No 795
Talkhīs al-makhruṭāt; M1. of No 439
Talkhīs maqālāt Abulūnyūs fī quṭū` al-makhrūṭāt; M7. of No 327
Talkhīṣ (Masā'il mulakhkhaṣāt) fī ma`rifat awqāt al-ṣalāt wa jihāt al-Qibla `inda `adam al-ālāt; A1. of No 797
Talkhīṣ Majma` al-ādāb fī mu`jam al-alqāb; HS2. of No 676
Talkhīṣ maqālat Manalāwūs fī ta'arruf al-jawāhir al-mukhtalifa; Mc2. of No 327
Talkhīṣ al-miftāḥ; M2. of No 802
Talkhīṣ min mufaṣṣal al-abwāb fī handasa-yi murabba`āt; Baku (Institute of Manuscripts B 6217)
Talkhīṣ qawā`id al-ḥisāb; M2. of No 1153
Talkhīṣ Qawānīn Aflāṭūn; PH10. of No 180
Talkhīṣ al-Shāfī; M16. of No 606
Tamhīd al-mustaqarr li-taḥqīq ma`nā al-mamarr; A16. of No 348
Tamkīn; A1. of No 501
K. al-talwīḥāt; E1. of No 497
K. al-tamḥīṣ fī sharḥ al-Talkhīs; M2. of No 784
R. dar tanāsub-i ta`līfī; M1. of No 833
al-M. tān al-ūlā wa'l-thāniya min kitāb Uqlīdis fī'l-Uṣūl; M1. of No 277
R. fī tanahī jirm al-`ālam; A3. of No 79
M. fī'l-tanbīh `alā mawāḍi` al-ghalaṭ fī kayfiyyat al-raṣad; A21. of No 328
K. al-tanbīh `alā sabīl al-sa`āda; PH8. of No 180
Fī'l-tanāsubāt; M14. of No 696; M3. of No 226
al-Tanbīh `alā ṣinā`at al-tambīh wa-hiya aḥkām al-nujūm; A48. of No 348
Tanbīh al-albāb `alā masā'il al-ḥisāb; M3. of No 696
Tanbīh al-Munajjimīn; A1.of No 0244
Tanbīh al-Nuqqād `alā mā fī'l-Hay'a al-Mashhūra min al-Fasād; A10. of No 983
K. al-tanbīh wa'l-ishrāf; G1. of No 186
Tanbīhāt al-munajjimīn; A3. of No 1069
Tanbīhāt al-munajjimin fī'l-nujūm; Istanbul (Süleymaniye, Yahya 242)
(K.)Fī'l-tanjīm; Fas (Zawiya 12a.); Baghdad (Ya`qub Sarkis 117)
Fī'l-tanjīm wa'l-ḥiṣāb; Kaduna (Jos Museum and Lugard Hall 868)
Tanqīh al-afkār fī'l-`ilm bi-rusūm al-ghubār; M3. of No 521
Tanqīḥ al-afkār fi A`māl al-Layl wa al-Nahār; A2. of No 1231
Tanqīḥ al-afkār fī a`māl al-layl wa'l-nahār; A5. of No 1193
Tanqīḥ al-ashkāl `alā Tawḍīḥ al-idrāk; A2. of No 1422
Tanqīḥ al-ḥisāb; Kazan (University 1201)
K. tanqīḥ al-manāẓir li dhawī al-abṣār wa'l-baṣāir; Ph1. of No 674
Tanqīh-i maqāla dar tawḍīḥ-i risāla; Tehran (Malik 492/9, 2522/4, 3099, 3251, 3287, 5445, 6161/1, 6293/3. = Tehran Majlis 2134)
Tanqīḥ-i maqāla dar tawḍīh-i risāla; Tehran (Majlis 2134, 5144. = Malik 492/9)
al-Tanqīh fī Taḥrīr fiṣḥ al-masīh;. A19. of No 1017
Tanṣīf hawāī; Istanbul (Süleymaniye, Laleli 2760)
Tansuq-nāma-yi īlkhānī = Jawāhir-nāma; M11. of No 606
Tanwīr al-minhāj ilā taḥlīl al-azyāj; A36. of No 348
Fī'l-taqāwīm; Paris (2524/9)
Taqāwīm al-sayyāra wa'l-a`māl al-zījiyya; Princeton (Garr. 1031)
Taqrīb al-aqṣā min masāil Ibn al-Banna; Paris (2464/2)
R. fī taqrīb qawl Arshimīdis fī qadr quṭr al-dā'ira ilā muḥīṭiha; M23. of No 79
R. fī taqrīb uṣul al-ḥisāb fī'l-jabr wa'l-muqābala; M4. of No 421
K. al-taqrīb wa'l-taysīr li-ifādat al-mubtadī bi-ṣinā`at misāḥat al-suṭuḥ; M1. of No 479
R. fī taqrīb watar al-dā'ira; M25. of No 79

R. fi taqrib watar al-tus`; M26. of No 79
Taqrir Tahrir Majisti; A1. of No 1181
Taqrir Tahrir Uqlidis; M1. of No 1181
Taqsim darajāt al-aflāk wa istikhrāj tathlith wa tarbi` wa tasdis; A1. of No 1164
Taqsim al-kura bi-suṭuḥ mustawiyya; M24. of No 277
R. fi taqsim al-mawjūdāt; PH6. of No 317
R. fi taqsim al-muthallath wa'l-murabba` wa `amalihima; M28. of No 79
K. fi taqsim al-nufūs; PH15. of No 317
R. fi taqsim rub` al-dā'ira; M1. of No 420
R. fi taqsim al-zāwiya; M1. of No 1419
Taqṭi` kardajāt al-jayb; M1. of No 11
Taqvim; A4. of No 1164
R.(-yi) (fi) taqwim; Hyderabad (Central State Jadid 4004); Istanbul (Süleymaniye AS 2596/2).; A1. of No 0232; A1. of No 1034
Taqwim; A2. of No 706
Taqwim-i `Abdallāh ibn Ḥasan `Ali; A1. of No 1396
Taqwim al-buldān = Aqālim al-buldān wa taqwimiha; G1. of No 680
K. taqwim al-dhihn; PH1. of No 431
Taqwim-i shar`i; A1. of No 1274
Taqwim al-kawākib al-sab`a; A2. of No 888
Taqwim-i khaṭṭi; Tabriz (Milli – National 232, 233)
Taqwim-i Khawaṣṣ; A6. of No 1344
Taqwim-i Luṭfi; A1. of No 0142; of No 1178
Taqwim al-Muḥsin; Aligarh (Azad Qutb al-Din 43/1)
Taqwim al-naẓar fi'l-masāil al-khilāfiyya; E1. of No 506
Taqwim-i Nujūm li Sana 1075; A3 of No 1354
al-Taqwim al-Qayyūm min ḥisāb Nūr al-Din ibn Muḥammad; A1. of No 1138
Fi taqwim al-Qibla bi-Bust bi-taṣḥiḥ ṭūlihā wa `arḍihā; G15. of No 348
Taqwim al-risāla al-muta`alliqa bi-rub` al-dā'ira; Paris (2544/8)
Taqwim al-sana al-`arabiyya al-qamariyya; A1. of No 1065
Taqwim li Sana 1145; A8. of No 1341
Taqwim Sāl 1127-1128; A6. of No 1314
Taqwim Sāl 1230-1231; A4. of No 1350
Taqwimu Salih Efendi; A7. of No 1384
Taqwim sanawi; Beirut (University of St.Joseph 202)
Taqwim-i tawārikh; H1. of No 1145
Taqwim turki; Beirut (University of St.Joseph 203)
al-Taqwim al-ziji; Istanbul (Beyazıt State, Veliyuddin 2327)
Taqyid fi istikhrāj al-a`mida fi'l-muthallathāt; Cairo (Fadil riyad. 39/3)
Ṭarā'if al-ḥisāb; M2. of No 124
Tarāzu-yi ḥikmat; Tehran (Sipahsalar 594, 712/2)
R. fi tarbi` al-dā'ira = K. fi imkān tarbi` al-dā'ira; M10. of No 328; Tehran (University 853)
K. al-tarbi` wa'l-tadwir; E1. of No 76
Ta`rib al-zij; A3. of No 802
Ta`rib Zij Ulugh Beg; A1.of No 883
al-Ta`rif bi'l-muṣṭalaḥ al-sharif; H1. of No 717
R. fi ta`rif su'l wa fawāid fi'l-ḥisāb; M2. of No 723
K. al-ta`rif bi-ṣūrat ṣan`at al-asṭurlāb; A2. of No 310
K. al-ta`rif bi-ṭabaqāt al-umam; H1. of No 384
Ta`rif al-waqt wa'l-Qibla wa'l-zawāl wa samt al-Qibla; A2. of No 1134
K. al-ta`rifāt; E3. of No 788
R. fi'l-tarikāt; Cairo (Fadil riyad 15/2)
K. al-ta'rikh; H2. of No 41
Ta'rikh; H1. of No 105
Ta'rikh-i aḥwāl; H1. of No 1339
Ta'rikh al-aṭibbā'; HS1. of No 114
Ta'rikh; Baghdād H1. of No 386
Ta'rikh-i guzida; H1. of No 708
Ta'rikh al-ḥukamā' = Ikhbār al-`ulamā' bi-akhbār al-ḥukamā'= Rawḍat al-`ulamā'; HS1. of No 579
Ṭariq fi istikhrāj khaṭṭayn bayna khaṭṭayn tatawālā `alā nisba; M12. of No 277
Ta'rikh madinat Dimashq; H2. of No 386
K. ta'rikh Miṣr al-mashhūr bi hadā'i` al-zuhūr fi waqā'i` al-duhūr; H1. of No 937
Ta`rikh al-Sheikh al-Ra'is Ḥujjat al-Ḥaqq Abi `Ali al-Ḥusayn ibn `Abdallāh ibn Sinā;`HS1. of No 317; HS1.of No 318
K. Ta'rikh sini mulūk al-arḍ wa'l-anbiyā'; H1. of No 196
K. ta`rikh `ulamā al-Andalus; HS1. of No 286
M. fi'l-ṭariq alladhi ātharahū `alā sā'ir al-ṭuruq fi ittikhādh al-ālāt al-raṣadiyya; A2. of No 317
Ṭariq `amal al-basiṭ; Paris (2547/1)
Ṭariq ḥisāb inḥirāf Qiblat Miṣr `alā mā dhakarahu al-`allāma Kushyār; A2. of No 1404
Ṭariq istikhrāj al-judhūr; Tashkent (Institute for Oriental Studies 2022/2)
R. fi ṭariq istikhrāj khaṭṭ niṣf al-nahār; A8. of No 283
R. fi ṭariq istikhrāj khaṭṭay al-qusṭās; Mc1. of No 283
M. fi'l-ṭariq bi isti`māl funūn al-asṭurlāb; A11. of No 348
R. dar ṭariq-i masāḥat-i `arḍ u iqlim u dhikr-i bilād; G1. of No 938
R. fi ṭariq al-masā'il al-`adadiyya; M1. of No 630
Ṭariq ma`rifat khusūf al-qamar; A18. of No 41
M. fi ṭariq al-taḥlil wa'l-tarkib wa sā'ir al-`amal fi'l-masā'il al-handasiyya; M1. of No 174
Ṭariq ilā taḥqiq ḥarakat al-shams; A21. of No 348
Ṭariqa fi istikhrāj al-khaṭa'ayn; M1. of No 475

al-Ṭarīqa al-jalīla = al-Ṭarīqa fi'l-ḥisāb = Ṭarīqat al-ḥussāb fī ṣinā`at al-kuttāb = Ṭarīqat al-Jaḥḥāf; M1. of No 1124

Ṭarīqa ukhrā fī ma`rifat sā`āt al-layl wa'l-nahār; Gotha (1378/3)

Ṭarīqat ḥisāb al-mā'ila wa rasmihā bi samt al-i`tidāl; A6. of No 888

Ṭarīqa-yi misāḥat-i raqba-yi dihāt; Hyderabad (Osmania University 1306)

Tarjama ba sharḥ-i Jabr wa muqābala al-Ṭusī; M1. of No 1108

Tarjama-yi Bīj Ganit; M1. of No 1174

Tarjama-yi kitāb-i Uqlīdis; M3. of No 668

Tarjama-yi Kitab-i ṣuwar-i kawākib; A4. of No 1178

Tarjama-i Mukhtaṣar dar Ma`rifat al-Taqwīm; A2. of No 809

Tarjama-yi nafīs Sharḥ-i Ashkāl al-ta'sīs; Hyderabad (Salar Jung Riyad. 3)

Tarjama-yi Risalat al-jayb; Istanbul (Süleymaniye AS 2594)

Tarjama-i Sī Fasl; A1. of No 809

Tarjamat al-Burjandī min al-Khusūf wa al-Kusūf; A3. of No 1383

Tarjamat Jadwal āfāqı;. A17. of No 933

Tarjamat R. al-Jayb; A18. of No 933

tarjamat ṣadr kitāb Uqlīdis; M3. of No 79

K. al-tarjumān fī ta`līm lughat al-suryān; L1. of No 349

R. fī tarkīb `adad al-wafq fi'l-murabba`āt; M4. of No 256

K. tarkīb al-aflāk = R. al-aflāk; A2. of No 296

K. tarkīb al-masā'il allatī ḥallalahā Abū Sa`d al-`Alā ibn Sahl; M8. of No 342

Tarkīb al-aflāk; A2. of No 11

Fī tarkīb min al-tasṭīḥayn; M1. of No 152

M. fī tarkīb li-taḥlīl muqaddimāt al-musabba` al-mutasāwī al-aḍlā` fi'l-dāira; Cairo (Fadil riyad. 41/15)

K. al-tarkīb wa'l-taḥlīl fī istikhrāj al-masāil al-`adadiyya; M1. of No 0110

Tartīb al-aqsām `alā madhhab al-imām al-shāfi`ī; M2. of No 1251

Tartīb Tashīl al-Mīqāt; A25. of No 990

Ṭarz al-jurar fī ḥall al-durar fī ma`rifat al-sā`āt; A1. of No 1040

M. fī taṣaffuḥ kalām Abī Sahl al-Kūhī fi'l-kawākib al-munqaḍḍa; A40. of No 348

Taṣānīf sulṭān al-ḥukamā wa'l-muḥaqqiqīn khwāja Naṣīr al-Dīn Muḥammad ibn Muḥammad al-Tūsī, quddisa qabruhū; HS1. of No 686

Taṣawwur amr al-fajr wa'l-shafaq fī jihatay al-sharq wa'l-gharb min al-ufuq; Mt3. of No 348

K. taṣḥīf al-manqūl min al-`arḍ wa'l-ṭūl; G7. of No 348

Fī taṣḥīḥ al-a`mal al-nujūmiyya; A17. of No 328

R. fī taṣḥīḥ awsaṭ al-qamar min al-arṣad al-khusūfiyya; A17. of No 802

K. fī taṣḥīḥ kitāb Ibrāhīm ibn Sīnan fī taṣḥīḥ ikhtilāf al-kawākib al-`ulwiya; A17. of No 299

R. fī taṣḥīḥ al-mayl wa `arḍ al-balad; A2. of No 269

Taṣḥīḥ al-misāḥa fī ṭaraf al-jayb min al-rub`; A50. of No 873

Taṣḥīḥ Rūznamā-yi Vafā'iya; A2. of No 1164

M. fī taṣḥīḥ al-ṭūl wa'l-`arḍ li-masākin al-ma`mūr min al-arḍ; G8. of No 348

R. fī taṣḥīḥ mā waqa`a li-Abī Ja`far al-Khāzin min al-sahw fī Zīj al-ṣafā'iḥ; A5. of No 299

Tashīl al-`ibāra fī taqwīm al-kawākib al-sayyāra; A11. of No 283

Tashīl al-Kawākib al-Sab`a al-Sayyāra; A3. of No 1385

Tashīl al-maṭālib fī ta`dīl al-kawākib; A1. of No 1252; A1. of No 780

Tas'hīl al-mīqāt fī `ilm al-awqāt; A7. of No 990

Tashīl al-Mīqāt wa Ta`yīn al-Awqāt; A24. of No 990

K. tashīl al-subul li-istikhrāj al-ashkāl al-handasiyya; M35. of No 296

al-Tashīl wa'l-taqrīb fī bayān ṭuruq al-ḥall wa'l-tarkīb; A22. of No 815

Tasḥīl al-zīj, Tasḥīlāt zīj al-`Imādı; A1. of No 939

Tashīl-i Zīj-i Muḥammad Shāhı; A1. of No 1415

Tashīl Zīj al-shar`iyya al-shāhinshāhiyya; A14. of No 1004

Tashīl zīj Ulugh Beg = Zīj al-Ṣūfı; A1. of No 888

Tashīlāt; A1. of No 1029

R. tashtamil `alā ba`ḍ qawā`id ḥisabiyya fī ma`rifat al-shuhūr wa'l-sinīn wa'l-manāzil wa awqāt al-ṣalawāt wa'l-Qibla = al-Qawā`id al-mufīda li l-adhhān al-balīda; A1. of No 1177

Tashrīḥ al-`amal; A6. of No 1108

Tashrīḥ dar a`māl-i pirkār-i mutanāsiba; M1. of No 1188

Tashrīḥ -i a`māl-i zīj; A1. of No 1255

Tashrīḥ al-aflāk; Baku (Institute of Manuscripts B 2352/4.); A1. of No 1058

Tashrīḥ falak, Tashrīḥ al-aflāk; A5. of No 1063

Tashrīḥ al-Fuṣūl al-muhimma fī mawārīth al-umma; M19. of No 873

Tashrīḥ fī `ilm al-tasṭīḥ; M1. of No 0274

Tashrīḥ al-kawākib wa'l-sayyārāt = Sharḥ al-saḥā'if; A2. of No 1285

Tashrīḥ al-kawākib wa'l-sayyārāt fi'l-taqwīm wa'l-zījāt; A1. of No 1285

Tashrīḥ al-kura; M1. of No 352

Tashrīḥ sharḥ al-Mulakhkhaṣ fi'l-hay'a; A2. of No 547

Tashrīḥ dar parkār; Mashhad (Imam Riza 39)

Tashrīḥ al-Tashrīḥ; Kazan (University 109)

Tashrīḥ al-ẓulm; Tehran (University 859)

al-Tashwīq al-ta`līmī fī `ilm al-hay'a; A1. of No 403
Ta'sīs fī `ilm al-handasa; Paris (2330/9)
Tasnīm al-muqarribīn fī sharḥ al-sā'irīn; A1. of No 0207
Taṣrīḥ al-idrāk fī sharḥ tashrīḥ al-aflāk; A2. of No 1369
(R.)(da)Tasṭīḥ; Tehran (Sipahsalar 668); Hyderabad (Central State Riyad. 14)
Tasṭīḥ al-asṭurlāb; M7. of No 635
Tasṭīḥ al-kura; M29. of No 606
(K.)(R.) fī tasṭīḥ al-kura; M35. of No 79; M1. of No 6
R. fī tasṭīḥ al-ṣuwar wa tabṭīḥ al-kuwar; M5. of No 348
K. fī'l-tasṭīḥ al-tāmm = Kayfiyyat tasṭīḥ al-kura; M1. of No 223
K. tasṭīḥ al-ukar = Dasūr al-tarjīḥ fī qawā`id al-tasṭīḥ; M3. of No 1004
Fī taṣwīr al-kawākib wa'l-buldān; Tehran (`Ulumi 64/2); M6. of No 348
Tasyīrāt al-kawākib; A23. of No 79; A1. of No 559
R. fī tasyīrāt nujmiyya; A4. of No 687
R. tataḍamman shakl handasī nujūmī; Oxford (Bodleian I 941/11)
Tathlīth al-zāwiya; Istanbul (Beyazıt State, Veliyuddin 2319)
M. fī tathlīth al-zāwiya wa `amal ḍil` al-musabba` al-mutasāwī al-aḍlā` fī'l-dā'ira; M11. of No 277
K. tathlīth al-zāwiya wa tasbī` al-dā'ira; M1. of No 1291
Tatimma-yi Qirānat-i Muḥammad Bakrānı; A1. of No 1276
Tatimmat al-risāla al-muta`alliqa bi rub` al-dā'ira; A11. of No 842
Tatimmat Ṣiwān al-ḥikma; HS1.of No 471
Tatmīm `amal al-asṭurlāb; A6. of No 727
Tauḍīḥ-i zīj-i īlkhānī; A1. of No 844
Ṭawāli` al-anwār fī'l-hay'a; Kazan (University 1069)
Ṭawāli` al-budūr fī taḥwīl al-sinīn wa'l-shuhūr; M1. of No 930
R. fī'l-tawārīkh; Cambridge (University, Browne 458)
K. fī'l tawassuṭ bayna Arisṭuṭālīs wa Jālīnūs fī'l-muḥarrik al-awwal; Ph1. of No 285
Tawḍīḥ al-Ahilla fī ma`rifat Taqwīm al-Kusūf wa al-Ahilla; A4. of No 1380
Tawḍīḥ al-idrāk `alā sharḥ Tashrīḥ al-aflāk; A1. of No 1422
Tawḍīḥ al-mīqāt; A2. of No 1002
Tawḍīḥ al-Tadhkira; A1. of No 756
Tawḍīḥ al-tibyān fī mi`yār al-mīzān; Me1. of No 096
Tawḍīḥ zīj al-Khwārizmī; A1. of No 210
Tawḍīḥ-i zīj-i İlkhānı; A1. of No 662; A1. of No 704
R. fī'l-tawḥīd min jihat al-`adad; M18. of No 79
Ṭawq al-ḥamāma fī'l-ulfa wa'l-ullāf; E1. of No 374
al-Tawqī`a al-falakiyya; A1. of No 1212
R. fī ta`yīn al-awqāt wa aḥwāl al-azmina wa tawārīkh al-sinīn; A5. of No 1032
M. fī ta`yīn al-balad min al-`arḍ wa'l-ṭūl; G9. of No 348
R. al-ṭayr; PH7. of No 317
Taysīr al-kawākib al-samā'iyya li-sa`d al-qawiya al-sharīfa al-Sulaymāniyya; A15. of No 990
Taysīr al-maṭālib fī tasyīr al-kawākib; A1. of No 614
M. fī tazyīf muqaddimāt maqālat Abī Sahl al-Kūhī fī anna nisbat al-quṭr ilā al-muḥīṭ nisbat al-wāḥid ilā thalātha wa tus`; M6. of No 458
M. fī tazyīf qawl al-qā'ilīn bi-tarkīb al-ajsām min ajzā' lā tatajazza'; M4. of No 198
Terceme-i Zīc-i Lalande; A3. of No 1350
Thabt barāhīn ba`ḍ ashkāl kitāb Uqlīdis; M10. of No 296
Thabt mā ṣannafa Abū'l-Ḥasan Thābit ibn Qurra al-Ṣābi' al-Ḥarrānī wa mā naqalahu wa aṣlaḥahu; HS1. of No 253
al-Thalāthat al-abwāb min ākhir al-risāla al-sittīniyya; A3. of No 775
al-R. al-thālitha fī kayfiyyat al-ḥisāb bi'l-takht; St. Petersburg (University 90/4)
R. fī thumn al-dā'ira = R. fī'l-`amal bi thumn al-dā'ira = R. jayb al-thumn; A1. of No 737
M. -yi thāniya dar ḥisāb-ı kusūr; Tashkent (Institute for Oriental Studies 2246/8)
M. fī thalāthat aflāk `Uṭārid; A2. of No 252
M. fī thalāthat masā'il handasiyya; M7. of No 342
K. al-thalāthīn mas'ala al-gharība; M4. of No 229
al-M. al-thālitha fī anwā` al-misāḥāt; Tashkent (Institute for Oriental Studies 6425/2)
al-M. al-thālitha min al-Qānūn al-Mas`-ūdī; M1. of No 348
al-M. al-thālitha min sharḥ li-kitāb Niqūmākhūs al-Garsānī al-ma`rūf bi'l-Arithmāṭiqā; M5. of No 219
al-Thamarāt al-majniyya min abwāb al-Fatḥiyya; A7. of No 1367
al-M. al-thāniya min tafsīr al-maqāla al-`āshira min K. Uqlīdis fī'l-uṣūl; Paris (2457/6)
al-M. al-thāniya fī'l-qawānin allatī yustakhraju bihā al-majhūl al-matlūb min al-ma`lūm al-mafrūḍ; M2. of No 1248
K. thimār al-`adad al-ma`rūf bi'l-mu`āmalāt = K. al-mu`āmalāt; M5. of No 310
K. fī thimār al-`adad = K. al-mu`āmalāt; M3. of No 281
K. al-thimār al-yāni`a `an quṭūf al-āla al-jāmi`a; A3. of No 1004
K. ṭibb al-rūḥānī; PH1. of No 142
Tibyān wa hidāyāt fī `ilm al-hay'a wa iṣṭ`ilāḥ ahlihā; Cairo (Taymur maj. 246/6)

Ṭirāz al-durar fī ru'yat al-ahilla wa'l-`amal bi'l-qamar; A23. of No 1243
Ṭirāz al-madhāhib; M26. of No 873
al-Ṭuffāḥa fī `ilm al-misāḥa; Jerusalem (National and University 205)
al-Tuffāḥa fī `ilm al-misāḥa; M1. of No 447
K. al-tuffāḥa fī `ilm al-misāḥa; M1. of No 0263
Tuḥfa-yi `Abbāsiyya; A2. of No 1059
Tuḥfa al-aḥbāb fī naṣb al-bādhāhanj wa'l-miḥrāb; A13. of No 815
al-Tuḥfa al-Ḥijāziyya fī nukhbat al-a`māl al-ḥisābiyya; M1. of No 1066
al-Tuḥfa fī'l-ḥisāb; Istanbul (Süleymaniye AS 2723)
Tuḥfa khānī - Sharḥ-i Khulāṣat al-ḥisāb; M2. of No 1154; M1. of No 1147
al-Tuḥfa al-Māridīniyya fī sharḥ al-Yāsamīniyya; M11. of No 873
al-Tuḥfa al-malakiyya fī'l-as'ila wa'l-ajwiba al-falakiyya; A1. of No 695
al-Tuḥfa al-Manṣūriyya al-Mukhtaṣara fī ma`rifat al-Qibla wa awqāt al-ṣalawāt; A36. of No 873
al-Tuḥfa fī ma`rifat al-sinīn wa'l-ayām; A1. of No 0220
al-Tuḥfa al-Muḥammadiyya; A1. of No 1059
Tuḥfa al-munajjimīn = Tuḥfa-yi Khānī; A1. of No 1082; A2. of No 1080
Tuḥfa al-Quds; A15. of No 903
al-Tuḥfa al-Qudsiyya fī `ilm al-farāiḍ; M21. of No 783
Tuḥfa-yi rūḥānī; A1. of No 894
Tuḥfa-i Salimiya; A16. of No 938
al-Tuḥfa al-shāhiyya fī'l-hay'a; A3. of No 668
Tuḥfa al-ṭālib fī `ilm al-kawākib; A1. of No 049
Tuḥfa al-ṭullāb fī sharḥ Nuzha al-ḥisāb; M1.of No 857; Istanbul (Süleymaniye, Laleli 2705)
al-Tuḥfa al-zawqiyya; M1. of No 0203
Tuḥfat al-a`dād li dhawī al-rushd wa'l-sadād = Tuḥfat al-a`dād fī'l-ḥisāb takkı; M1.of No 1051
Tuḥfat al-afāḍil fī sharḥ al-manāzil; St. Petersburg (Institute of Oriental B 3516)
Tuḥfat al-aḥbāb (K. al-Nuzha) fī `ilm al-ḥisāb = Tuḥfat al-aḥbāb fī `amal al-ḥisāb; M12. of No 873
Tuḥfat al-aḥbāb fī `ilm ṣinā`at al-asṭurlāb; Hyderabad (Salar Jung Hay'a 31/6); A1. of No 0135
Tuḥfat al-aḥbāb fī-`amal al-asṭurlāb; M1. of No 0120
Tuhīfat al-akhyar fi `ilm al-ghubar; M1. of No 020
Tuḥfat al-albāb fī bayān aḥkām al-adhnāb; A2. of No 1220
Tuḥfat al-amīr; M1. of No 1201; MA1. of No 944
Tuḥfat al-fukarā fi `ilm al-mīqāt min ṭarīq rub` dā'irat al-muqanṭarāt; A8. of No 933
Tuḥfat al-ḥaqīr fī rub` al-dā'ira wa ghayrihī; A1. of No 854
Tuḥfat al-ḥisāb; M1. of No 900
Tuḥfat al-ḥussāb fī `adad al-sinīn wa'l-ḥisāb; M1. of No 831
Tuḥfat al-kibār fī asfār al-biḥār; G2. of No 1145
Tuḥfat al-labīb wa bughyat al-arīb; A1. of No 1220
Tuḥfat al-majālis; Hyderabad (Central State Riyad. 212)
Tuḥfat al-masā'il fī `amal al-khusūf `alā ṭarīq al-jadāwil; A8. of No 1214
Tuḥfat al-muḥtāj fī `ilm al-ta`dīl wa'l-azyāj; A10. of No 1207
Tuḥfat al-mulūk; A1. of No 989; Tehran (Majlis 2128.); Tehran (University 2523/3); Tehran (University Adab. 360/5)
Tuḥfat al-munajjimīn; Tehran (Malik 6267/3)
Tuḥfat al-munajjimīn min anīs al-munajjimīn; St. Petersburg (National Khanykov 129/2)
Tuḥfat al-nāẓirīn; Ph5. of No 606
Tuḥfa-yi Niẓāmiyya = Chihil faṣl; A2. of No 915
Tuḥfa-yi Nu`māniyya; A3. of No 915
Tuḥfat al-nuẓẓār fī inshā al-`iyār min aṣl al-mi`yār; Me6. of No 888
Tuḥfat al-quḍāt; A1. of No 904
Tuḥfat al-rāghib wa turfat al-ṭālib fī taysīr al-nayyirayn wa ḥarakāt al-kawākib; A6. of No 608
Tuḥfat al-Ra'īs Sharḥ Ashkāl al-ta'sīs; M2. of No 808
Tuḥfat al-Ṣadr; Z1. of No 1266
Tuḥfat al-sāmi` fī mā yata`allaqu bi'l-burūj wa'l-ṭawāli`; A28. of No 750
Tuḥfat al-sāmi` mubayyin aḥwāl al-kawākib al-sab`a wa iqtirānātihā wa mā ya`liqu minhā; A2. of No 1338
Tuḥfat al-ṣudūr; M1. of No 594
Tuḥfat-i Sulaumānī; A2. of No 1188
Tuḥfat al-sulṭān fī asbab al-`irfān; A11. of No 802
Tuḥfat al-ṭullāb bi jam` `Umdat al-ṭullāb; M3. of No 842
Tuḥfat al-ṭullāb fī `amal al-asturlāb; Princeton (Garr. 1024)
Tuḥfat al-ṭullāb fī bayān ḥaqīqat dhawāt al-adhnāb; A1. of No 1253
Tuḥfat al-ṭullāb fī `ilm al-ḥisāb; M1. of No 784
Tuḥfat al-ṭullāb fī kayfiyyat istikhrāj al-a`māl al-falakiyya bi'l-ḥisāb; A29. of No 842
Tuḥfat al-ṭullāb fī sharḥ al-lubāb fī uṣūl al-ḥisāb; M1. of No 0208
Tuḥfat al-ṭullāb fī sharḥ Nuzhat al-ḥisāb; M1. of No 786
Tuḥfat al-ṭullāb fī'l-`amal bi rub` al-asṭurlāb; Berlin (State 5808); A1.of No 769
Tuḥfat ūlā al-albāb fī `amal al-asṭurlāb; A1. of No 1176
Tuḥfat al-Ustādh; A1. of No 1089
Tuḥfat al-zamān wa kharīdat al-awān; A11. of No 990
al-Ṭūl wa'l-`arḍ; A13. of No 317

K. fi'l-Ṭullāb wa Rasm al-Munḥarifāt wa'l-Basā'iṭ wa'l-Mazāwin wa'l-Asṭiḥa; A6. of No 1341
Fī anna ṭulū` al-kawākib wa ghurūbuhā min ḥarakat al-samā' dūna ḥarakat al-arḍ; A3. of No 142
R. fi ṭulū` al-shams wa'l-ghurūb wa'l-tawassuṭ fi balad bi'l-nisba ilā balad ukhrā; A6. of No 856
al-Ṭuraf (al-Ṭuruq) al-saniyya fi ḥisāb al-nisba al-sittīniyya; M3. of No 873
K. al-ṭurfa al-gharība min akhbār wādī Ḥaḍranawt al-`ajība; G2. of No 810
al-R. al-turkiyya fi'l-a`māl al-jaybiyya; Cairo (Mīqāt turki 19)
al-Ṭuruq al-saniyya fi'l-ālāt al-rūḥāniyya; Me3. of No 1004
al-Tūtiyya al-Kubrā; A14. of No 1008

-U-

Uddat al-ḥāsib wa `umdat al-ḥisāb; Jerusalem (National and University Yehuda 456)
al-`Ujāla `alā a`dal āla; A1. of No 1367
Ujālat al-rub`; A1. of No 1258
M. fi'l-ukar wa sharḥ al-mujassamāt; M52. of No 328
R.-yi Ulugh Beg; A2. of No 816
(K.)(R.) (fi'l-)`ulūm al-nujūm; Dushanbe (Institute of Oriental Studies 2474); A2. of No 88
`Umda al-ḥisāb; M1. of No 1397
al-`Umda al-īlkhāniyya = Zīj-i shāhı; A3. of No 687
al-`Umda al-Mahriyya fi ḍabṭ al-`ulūm al-baḥriyya; AG2. of No 956
`Umda ūlā li nadā al-`irfān fi `ilm al-mīqāt wa'l-Qibla bi Dāghistān; A15. of No 1243
`Umdat al-dhākir li-waḍ` khuṭūṭ faḍl al-dā'ir; A1. of No 828
`Umdat dhawī al-albāb fi ma`rifat istikhrāj al-a`māl al-falakiyya bi'l-ḥisāb bi ghayr ḥijāb; A13. of No 888
`Umdat dhawī al-aqlāb fi `ilm al-asṭurlāb = Sharḥ manẓūmat Bughya al-ṭullāb fi `ilm al-asṭurlāb; A1.of No 866
`Umdat al-ḥāsib wa ghunya al-ṭālib; A5. of No 635
`Umdat al-ḥisāb fi furūḍ al-maqdira bi'l-kulliyyāt; M2. of No 1001
`Umdat al-ḥisāb; M1. of No 589
`Umdat al-Hudhdhāq fi'l-`Amal bihā fi Sā'ir al-Awqāt; A13. of No 1008
`Umdat al-hudhdhāq fi'l-`amal bi'l-rub` fi sā'ir al-āfāq; A2. of No 847
`Umdat al-mu'tamm wa'l-imām fi ma`rifat awqāt al-ṣalawāt bi'l-balad al-ḥarām; A1. of No 743
Umdat al-nuẓẓār fi mawāqīt al-layl wa'l-nahār; Berlin (State 5724)
`Umdat al-rā'iḍ wa `uddat al-fāriḍ fi'l-ḥisāb; M2. of No 602
`Umdat al-ṭullāb fi `amal al-asṭurlāb; A3. of No 1256
`Umdat al-ṭullāb fi `ilm al-ḥisāb; M1. of No 1045
`Umdat al-ṭullāb wa kayfiyyat istikhrāj al-`amal bi'l-ḥisāb; A28. of No 842
al-R. al-`umdiya fi'l-ṭuruq al-ḥisābiyya; M1. of No 011
Unmūdhaj al-`ulūm; E1. of No 1009; E1. of No 507; E1. of No 806; E1. of No 894
Unmūdhaj al-funūn; E2. of No 1003
Unmūdhaj fi'l-`ilm al-falak; A1. of No 1044
Uns al-muhaj wa rawḍ al-furaj; G2. of No 470
`Unwān al-muhimmāt fi taḥrīr al-awqāt; A1. of No 1012
`Unwān al-muhimmāt fi taḥrīr al-awqāt; A8. of No 1018
`Uqad al-anāmil; M1. of No 0118
R.-yi Uqlīdis; Kabul (Ettalaat, 87)
Uqlīdis; Bombay (Asiatic Society 6)
K. Uqlīdis fi'l-thikl wa'l-khiffa wa qiyās al-ajrām ba`ḍuhā ilā ba`ḍin; Me1. of No 606
K. al-uqnūm fi mabādī' al-`ulūm; E1. of No 1207
R. al-`uqūd; Berlin ((IGMN)26)
`Uqūd (Naẓm) al-la'ālī fi'l-`amal bi'l-rub` al-hilālī; A31. of No 873
K. `uqūd al-abniya; Me2. of No 309
R.-yi `uqūd-i `asharat; Hyderabad (Salar Jung Hay'a 38/1)
R. al-`uqūd wa'l-mawāzīn wa'l-makāyīl; Baghdad (Institute of Islamic Research 91/2)
al-R. al-`uqūdiyya; M1. of No 1215
`Uqūl `ashara; E1. of No 1185
Urjūza = Manẓuma al-Tilimsāniyya fi'l-farāiḍ; M1. of No 637
Urjūza fi Ma`rifat al-Kawākib; A5. of No 1096
Urjūza fi `ilm al-mīqāt; A1. of No 08
Urjūza fi fuṣūl al-sana; A15. of No 317
Urjūza fi ḥall al-a`dād; M3. of No 1340
Urjūza fi ṣuwar al-kawākib al-thābita; A1. of No 216
Urjūza fi tarḥīl al-shams; Kraków (University 2543/3)
Urjūza fi waṣf al- manāzil; A1. of No 986
Urjūza fi'l-manāzil wa awqāt ṭulū`ihā fi kull `aṣr; A3. of No 798
Urjūza fi'l-ḥisāba al-Rūmiyya; Rome (Vatican Borg. 3/13)
Urjūza fi'l-nujūm; A1. of No 0249
Urjūza fi'l-ashhār; A1. of No 1203
Urjūza fi'l-farāiḍ; M1. of No 626
Urjūza fi'l-farāiḍ; M1. of No 681
Urjūza fi'l-judhūr = Urjūza mushtamila `alā a`māl al-judhūr; M2. of No 521
Urjūza fi'l-kawākib; A24. of No 750
Urjūza fi'l-shuhūr al-Rūmiyya; A1. of No 488
Urjūza fi'l-ṭibb; ME2. of No 317

Urjūza ḥisāb; M2. of No 353
Urjūza li'l-Jayb wa'l-ḍarb wa'l-Qisma; A26. of No 1004
Urjūzat al-nawāẓir; A2. of No 61
al-Urjūza (Manẓūma) al-Yāsamīniyya fi'l-jabr wa'l-muqābala; M1. of No 521
al-Urjūza al-Raḥbiyya = Bughya (Ghunya) al-bāḥith `an jumal al-mawārīth (fī `ilm al-wārith wa'l-farāiḍ); M1. of No 493
al-Urjūza fi'l-ḥudūd; A7. of No 6
K. al-urūḍ; G4. of No 103
R. fī `urūḍ al-bilād wa aṭwālihā; G1. of No 813
R. fī `urūḍ al-kawākib; A2. of No 82
R. ilā'l-ustādh al-fāḍil Abī Muḥammad `Abdallāh al-Ḥāsib fi'l-dalāla `alā ṭarīqay al-ustādh Abī Sahl al-Kūhī al-muhandis wa'l-sheikh Abī Ḥāmid al-Ṣaghānī wa ṭarīqihī allatī salakahā fī `amal al-musabba` al-mutasāwī al-aḍlā` fi'l-dā'ira; M1. of No 342
R.(-yi) (dar) dar usṭurlāb; A25. of No 606; A1. of No 1068; A4. of No 1108
K. al-uṣūl; A1. of No 319
Fī uṣūl al-`adad; St. Petersburg (Institute of Oriental D 487)
Fī uṣūl al-aḥkām; A2. of No 329
R. fī uṣūl aḥkām al-qirānāt; A4. of No 135
K. 'al-uṣūl fi'l-handasa; M2. of No 589
K. fī uṣūl al-handasa li Arshimīdīs; M3. of No 103
K. uṣūl al-handasa wa'l-ḥisāb; M1. of No 0288
K. al-uṣūl al-handasiyya; M11. of No 194
K. fi'l-uṣūl al-handasiyya; M2. of No 167
Fī uṣūl ḥisāb al-Hind; M1. of No 308
Uṣūl al-iḥkām fī aḥkām al-nujūm; A2. of No 1104
R. fī uṣūl `ilm al-asṭurlāb; A6. of No 750
R. `alā uṣūl `ilm al-misāḥa mujarrada min al-amthila; Berlin (State 5953)
(K). fī uṣūl `ilm al-nujūm; A1. of No 67; A2. of No 608
Uṣūl Jadāwil Ansāb Sittīnī;. A9. of No 1390
M. fī uṣūl al-masā'il al-`adadiyya al-ṣammā' wa taḥlīlihā; M13. of No 327
K. al-uṣūl fi'l-nujūm; A1.of No 27
Uṣūl-i nujūm u aḥkām; A1. of No 085
al-Uṣūl al-rawāsikh fī ma`rifat al-bu`d wa'l-jiha; A16. of No 1017
al-Uṣūl al-thamira fi'l-`amal bi rub` al-musātar; A3. of No 695
Uṣūl Uqlīdis fī `ilm al-handasa; Bombay (Asiatic Society 5)
al-Uṣūl wa'l-muqaddimāt fi'l-jabr wa'l-muqābala; M11. of No 696
Uṣūl yusta`ānu bihā fī masā'il al-jabr wa'l-muqābala; M6. of No 527; Tashkent (Institute for Oriental Studies 2022/5)
R. `Uṭārid; Calcutta (Asiatic Society of Bengal 1482/2)
Uṭrūfa qadīma; Berlin (State Oct. 3964)
`Uyūn al-akhbār; H1. of No 94
`Uyūn al-anbā fī ṭabaqāt al-aṭibbā; HS1. of No 601
`Uyūn al-ḥikma; PH8. of No 317
`Uyūn al-ḥisāb; M1.of No 1080; Tehran (University 923)
`Uyūn al-uṣūl fi'l-ḥisāb = `Uyūn al-uṣūl fi'l-ḥisāb al-hindī; M2. of No 308
R. fī `uyūn al-masā'il; PH2. of No 180

-W-

R. fī waḍ` al-asṭurlāb bi'l-handasa; A2. of No 0224
al-Waḍ` `alā jihāt al-basā'iṭ wa'l-munḥarifāt; A1. of No 946
Waḍ` al-dāira al-hindiyya; Rome (Vatican Borg. 217/4)
R. fī waḍ` al-kawākib fi'l-kura wa'l-asṭurlāb; Cairo (Taymur riyad. 325/1)
R. fī waḍ` al-'l-rub`; A4. of No 1176; A3. of No 0224
K. wafayāt al-a`yān wa anbā abnā al-zamān; HS1. of No 625
al-Wāfī fi'l-ḥisāb; M3. of No 287
Wāfiyat al-Awqāt; A26. of No 990
Wāfiyyat al-maṭlūb; A7. of No 1207
R. fi'l-wafq; Tashkent (Institute for Oriental Studies 2572/35)
R. dar wafq-i a`dād; M2. of No 88
R. al-wāḥiyya; ME2. of No 317
Wajh-i dīn; PH2. of No 393
Wajīz al-zīj al-mu`tabar al-sulṭānī; A2. of No 476
Wajīz fi'l-handasa; M3. of No 431
R. wajīza mufīda fi'l-`amal bi rub` al-shakāziyya; A1. of No 767
R.-yi waqtiyya; A2. of No 1204
Waraqāt (R.) fi'l-`amal bi rub` al-dā'ira al-mawḍū ` fīhī (alladhī `alayhi) al-muqanṭa-rāt; A4. of No 775
Waraqāt `alā risālat al-Māridīnī fi'l-`amal bi'l-rub` al-mujayyab; A6. of No 775
R. fi'l-waṣāya; M5. of No 224
K. al-wasā'il ilā ma`rifat al-Awā'il; E3. of No 896
K. al-wasāṭa baynahumā; A30. of No 348
K. al-waṣāya; M4. of No 97
K. al-waṣāyā; M2. of No 225; M6. of No231
al-Waṣāya bi'l-jabr wa'l-muqābala; M6. of No 124
al-Waṣāya bi'l-judhūr; M5. of No 124
R. fī waṣf al-ma`ānī allatī istakhrajahā fī `ilm al-handasa wa `ilm al-nujūm; M4. of No 174

Waṣf tamwīh Abī'l-Jūd Muḥammad ibn Abī'l-Layth fī amr mā qaddamahu min al-muqaddimatayn li-`amal al-musabba`; M2. of No 483
R. fī waṣf al-quṭū` al-makhrūṭiyya; M3. of No 296
al-Wasīla fī `ilm al-ḥisāb = al-Wasīla fī ṣinā`at al-hawā'ı; M8. of No 783
Wasīla = Sharḥ-ı mukhtaṣar dar ma`rifat-i taqwīm; A1. of No 0233
Wasīla; A8. of No 1069
Wasīlat nuzhat al-albāb fī `ilm al-ḥisāb; M1. of No 022; M1.of No 976
Wasīlat al-thiqāt bi fahm ālat al-muqanṭarāt; A2. of No 1373
Wasīlat al-ṭullāb fī ma`rifat al-awqāt bi'l-hisāb; A5. of No 873
Wasīlat al-ṭullāb li ma`rifat a`māl al-layl wa'l-nahār bi ṭarīq al-ḥisāb; A2. of No 1006
Wasīlat al-Wasīla fī'l-ḥisāb; M3. of No 955
R. fī waṣiyāt; M2. of No 1200
R. al-watar wa'l-jayb; M4. of No 802
Wiqāyat al-riwāya fī masāil al-hidāya; E1. of No 504
R. fī wujūb ṣinā`at al-kīmiyā; Ch1. of No 180
R. fī'l-wujūd; PH1. of No 420
R. fī wujūd khaṭṭayn yaqrubān wa lā yaltaqiyān; Cairo (Falak 4528/3)
M. fī wujūd nuqaṭ wa khuṭūṭ ṭabī`iyya; M1. of No 369
R. fī wujūh al-a`dād al-mutanāsiba wa wujūh taqsīm al-ghuramā'; Cairo (Tal`at majamī` 635/2)
Wujūh `amal al-ḍarb fī'l-takht wa'l-turāb; M5. of No 802
Wujūh-i Qur'ān; L2. of No 567
`An wujūd maṭāli` qaws ma`lūma fī falak al-burūj fī balad ma`lūm al-`Arḍ aw ta`dīl nahārihā; A1. of No 277

-Y-

Fīmā yaḥtāju al-ṭabīb min `ilm al-falak; A1. of No 460
K. fīmā yaḥtāju ilayhi al-kuttāb wa'l-`ummāl wa ghayruhum min `ilm al-ḥisāb= K. al-manāzil fī'l-ḥisāb = K. al-manāzil al-sab`; M2. of No 256
K. fīmā yaḥtāju ilayhi al-ṣāni` min al-a`māl al-handasiyya = K. al-najāra fī `amal al-masṭara wa'l-birkār wa'l-kunyā; M3. of No 256
K. yaḥtawī `alā arṣād lahū wa rasāil ilā jamā`a fī'l-arṣād; A5. of No 31
R. fīmā yanbaghī an yuqaddam qabl ta`allum al-falsafa; PH7. of No 180
Yantra-rāja-chanā; A2. of No 1322
M. fī mā ya`riḍu min al-ikhtilāf fī irtifā`āt al-kawākib; A10. of No 328
R. (Nukat) fīmā yaṣiḥḥu min aḥkām al-nujūm = K. al-tadhākīr (R.) fī ibṭāl aḥkām al-nujūm; A3. of No 180
K. al-yassāra fī taqwīm al-kawākib al-sayyāra; A3. of No 696
K. yataḍamanu min abwāb al-`amal bi'l-asṭurlāb mā lā budda minhu; Paris (5972/3)
K. al-yawāqīt fī `ilm al-mawāqīt; A2. of No 645
al-Yawāqīt fī `ilm al-mawāqīt; A1. of No 968; A2. of No 982
al-Yawāqīt al-mufaṣṣalāt bi'l-La'ālī al-nayyirāt; M2. of No 1094
Yawāqīt (fī)al-mawāqīt; A1. of No 04; A1. of No 690; A1. of No 837; A1. of No 632
al-Yawāqīt li'l-mubtadī fī ma`rifat al-mawāqīt; A3. of No 1194
K. al-yawāqīt fī ma`rifat al-mawāqīt; A1. of No 0114; A1. of No 1280; (Jakarta State Sup. 631)
K. fīmā yaẓharu fī'l-qamar min āthār wa `alāmātihī; A25. of No 103
Yedi Yıldızın aḥkāmı; A2. of No 872
M. fī anna mā yurā min al-samā huwa akthar min niṣfihā; A23. of No 328
Yūsuf wa Zulaykha; L1. of No 882

-Z-

K. zād al-musāfir; A8. of No 157
Zād al-musāfir fī rasm khuṭūṭ faḍl al-dā'ir; A2. of No 815
K. zād al-musāfirīn; PH1. of No 393
Zād al-safar fī'l-`amal bi'l-qamar; A23. of No 842
Fī mā zāda min al-ashkāl fī ākhir al-maqāla al-thālitha min K. al-uṣūl li-Uqlīdis limā yuḥtaju `alayhi; M4. of No 277
Fī mā zāda min al-ashkāl fī amr al-maqāla al-thāniya; M3. of No 277
K. al-ẓafar fī'l-jabr wa'l-muqābalā; M27. of No 606
Ẓafar-nāma; PH15. of No 317
Ẓafar-nāma-yi Tīmūrī; H1. of No 825
al-Ẓāhirāt fī'l-`amal bi-rub` al-muqanṭarāt; Berlin ((IGMN)II. 11)
R. fī ẓāhirāt al-falak; A12. of No 79
al-K. fī'l-zamān wa'l-makān; M1. of No 142
al-Zand al-murī fī'l-`amal bi'l-jayb bi ghayr murī = al-Mazīd al-murī fī'l-`amal bi'l-jayb bi ghayr murī; A33. of No 750
Zād al-musāfir fī ma`rifat al-awqāt wa faḍl al-dā'ir; A5. of No 1086
K. Zarādusht fī ṣuwar darajāt al-falak; A4. of No 296
Ẓarāif min `amal Muḥammad ibn Mūsā al-Khwārizmī: ma`rifat al-samt bi'l-asṭurlāb; A10. of No 41
R. al-zarqāla; A13. of No 940

R. al-zarqālī al-shakāzī; A2. of No 762
R. fī zawāyā al-muthallath; M2. of No 772
R. al-zawāyā al-thalātha; Baku (Institute of Manuscripts B 2013/5, 4093/2)
Zīch-i Bahādur-Khānī; A1. of No 1417
(K.)(-i) (al-)zīj; Paris (5968/1.); Patna (Bankipore 2467.); St. Petersburg (Institute of Oriental D 372.); Hyderabad (Salar Jung Hay'a 27.); St. Petersburg (University 393.); A1. of No 12; A1. of No 13; A1. of No 48; A1. of No 71; A1. of No 748; A1. of No 873; A1. of No 97; A1.of No 87; A2. of No 325; A2. of No 58; Dushanbe (Institut-i Zabon u Adabiyot 34.); Kazan (University 4.); Paris (Pers. 794.); Tehran (Majlis 181, 1918/15, 2425/1, 4829/6.); Tehran (Mu`tamid 117/4.); Tehran (University 494, 891, 4820.); Tehran (University Adab. 378.).; A1. of No 1163; A1. of No 227; A1. of No 506; A1. of No 520; A1. of No 57; A1. of No 578; A1. of No 721; A1. of No 874; A1. of No 93; A2. of No 116; A2. of No 173; A2. of No 54; A3. of No 888; A8 of No 74; A2. of No 46
Zīj = al-Zīj al-jadīd; A3. of No 750

(al-)Zīj-i (al-)`Aḍudī; A15. of No 308; A1. of No 211
al-Zīj al-`Adlī; A1. of No 315
Zīj al-`Alā'ī; A8. of No 686
al-Zīj al-`Alā'ī al-raṣadī; A6. of No 443
Zīj-i Ashrafī; A1. of No 688
al-Zīj al-badī`; A7. of No 157
Zīj al-Baghdādī = al-Zīj al-Waqibiyya; A1. of No 609
al-Zīj al-Fākhir; A2. of No 341
Zīj fī'l-falak; Baghdad (Waqfs 2966)
K. al-zīj fī'l-falak; A1. of No 1086
al-Zīj al-Hārūnī; A1.of No 102
al-Zīj al-handasī; A1. of No 237
K. Zīj al-hazārāt; A1. of No 88
Zīj-i Īlkhānī; A8. of No 606
Zīj-i jadīd-i Muḥammad-shāhī; A1. of No 1322
Zīj-i jāmi`; A2. of No 844
Zīj jāmi` Sa`īdī; A3. of No 951
al-Zīj al-jāmi` wa'l-bāligh; A1. of No 308
al-Zīj al-kabīr; A1. of No125; A7. of No 135
al-Zīj al-kabīr al-Ḥākimī; A1. of No 283
al-Zīj al-kāfī; A5. of No 233
al-Zīj al-kāmil; A1. of No 287
al-Zīj al-kāmil fī'l-ta`ālīm; A1.of No 531
Zīj al-Kāshī; A2. of No 802
Zīj al-Kawākib al-khamsa; A1. of No 0138
al-Zīj al-khāliṣ; A3. of No 157
Zīj-i Khānī; A3. of No 658
Zīj-i Khāqānī; A1. of No 076
Zīj-i Khāqānī dar takmīl-i zīj-i īlkhānī; A1. of No 802
Zīj al-Khwārizmī; A1. of No 41
Zīj-i Khwārizmshāhī; A1. of No 687
Zīj Kūshyār al-Jīlī; A2. of No 308
al-Zīj al-laṭīf; A1. of No 9
Zīj al-Lum`a fī ḥall al-sab`a; Bombay (Asiatic Society 55)
al-Zīj al-mabnī `ala'l-raṣad al-mujarrab; A2. of No 599
al-Zīj al-maḥlūl min al-Sindhind li daraja daraja; A1. of No 11
al-Zīj al-Maḥmūdī; A2. of No 438
al-Zīj Malik-shāhī; A2. of No 420
al-Zīj al-mamarrāt; A6. of No 157
al-Zīj al-Ma`mūnī al-mumtaḥān; A1. of No 31; A3. of No 46
K. zīj al-Marrīkh `alā'l-ta'rīkh al-fārisī; A10. of No 157
al-Zīj al-ma`rūf bi'l-Dimashqī; A1. of No 46
Zīj-i Mīr `ālamī; A1. of No 1418
Zīj-i mufrad; A2. of No 301
al-Zīj al-mufīd `alā uṣūl al-raṣad al-jadīd; A13. of No 1243
al-Zīj al-Mughnī; A5. of No 443
Zīj Muḥammad b. Abī al-Fatḥ al-Ṣūfī; A42. of No 888
Zīj muḥaqqaq al-sulṭānī; A2. of No 704
al-Zīj al-muḥaqqaq al-sulṭānī `alā uṣūl al-raṣad al-ilkhānī; A1. of No 709
al-Zīj al-muḥkam; A2. of No 443
al-Zīj al-mukhtār min al-azyāj al-mufḍī bi'l-`āmil bihī ilā awḍaḥ ṭarīqa wa minhāj; A1. of No 653
al-Zīj al-mukhtārī; A3. of No 70
al-Zīj al-mukhtaṣar `alā ṭarīq al-Sindhind; - Paris (Hebr. 1102 - only seven chapters); A3. of No 312
al-Zīj al-mukhtaṣar; A1. of No 108; A1. of No 247
al-Zīj al-mukhtaṣar fī taqwīm al-kawākib al-khamsa wa'l-shams wa'l-qamar = Zād al-musāfir; A1. of No 962
al-Zīj al-mulakhkhaṣ `alā al-raṣad al-`Alā'ī; A1. of No 595
Zīj-i mulakhkhaṣ-i Mīrzāyi; A4. of No 915
al-Zīj al-mumtaḥan al-Khazā'inī = al-Zīj al-Muẓaffarī = Zīj al-Fārisī; A5. of No 608
al-Zīj al-mushtamil; A1. of No 39
al-Zīj al-muṣṭalaḥ; A1. of No 603
al-Zīj al-mustawfī; A3. of No 670; A3. of No 443
K. al-zīj al-muṣṭalaḥ; Paris (2520)
K. al-zīj al-mutarjam bi'l-`arabiyya min al-faranjiyya; A2. of No 948
al-Zīj al-mu`tabar al-Sanjarī al-sulṭānī; A1. of No 476
Zīj al-Mu`taḍid; A11. of No 135
al-Zīj al-mu`tadil; A4. of No 443
Zīj al-Muthannā al-Sharjī = Ghāyat itqān al-ḥarakāt li'l-sab`a al-kawākib al-sayārāt; A1. of No 1208
al-Zīj al-muzannir; A4. of No 157
Zīj al-Najrānī; A1. of No 773

Zīj-i Nāṣirī; A1. of No 573
Zīj al-nayyirayn; A1. of No 181
Zīj-i Niẓāmī; A1. of No 1264
Zīj-i Raḥīmī; A3. of No 1092
Zīj-i raṣad-i siyār[āt]; A4. of No 658
Zīj - qassīda; A8. of No 6
al-Zīj al-qawīm fī funūn al-ta`dīl wa'l-taqwīm; A2. of No 670
al-Zīj al-Ṣābī' = al-Jāmi` fī ḥisāb al-nujūm wa mawāḍi` masīrihā al-mumtaḥan; A1. of No 137
Zīj Sanjaqdār; A1. of No 1169
Zīj al-ṣafāiḥ; A2. of No 194
Zīj-i Safdarī; A2. of No 1418
al-Zīj al-Ṣaghīr; A8. of No 135
al-Zīj al-Ṣaghīr= Zīj al-qirānāt wa'l-ikhtirāqāt; A19. of No 88
Zīj-i ṣaghīr-i Maẓharī; A4. of No 1010
(al-)Zīj(-i) (al-)Shāhī; A2. of No 593; A1. of No 599; A7. of No 46
al-Zīj al-shāmil; Cairo (Falak 22519 = Riyad 296/1.); London (British 386/2); Paris (2528, 2529)
Zīj Shams al-Dīn; A1. of No 830
Zīj al-Shastka, Zīj-i Shastgāh; A1. of No 516
al-Zīj `alā sinī al-`Arab; A2. of No 6
Zīj-i Sulṭānī; A6. of No 668
Zīj fī'l-ṭarīq al-hindī; A3. of No 310
Zīj al-ṭaylasān; A2. of No 157
R. dar zīj; Tehran (Mu`tamid 124)
Zīj li ṭūl Miṣr al-Qāhira; A16. of No 1243
al-Zīj al-Ṭulaytalī; A6. of No 402
Zīj Ulugh beg al-Samarkandī bi'l-raṣad al-jadīd; A1. of No 0101
Zīj-i Ulugh Beg = Zīj-i sulṭānī = Zīj-i jadīd-i Gurgāni; A1. A2. of No 816
Zīj-i Yamīnī; (Sofia1750)
al-Zīj al-zāhir; A1. of No 443
R. al-ẓill; M1. of No 0155
al-R. al-ẓilliyya; A8. of No 608
Ziyāda `alā'l-maqāla al-`āshira min kitāb al-uṣūl; Paris (2457/18)
Ziyāda al-hay'a; Istanbul (Nuruosmaniye 2931)
Ziyādāt fī'l-maqāla al-khāmisa min kitāb Uqlīdis; M1. of No 43
Ziyādāt li-kitāb Uqlīdis fī'l-Mu`ṭayāt; M5. of No 277
Ziyādāt li'l- (R. fī taṣḥīḥ al-) maqāla al-thāniya min K. al-kura wa'l-usṭuwāna li-Arshimīdis; M6. of No 277
Zubd al-raqā'iq fī ḥisāb al-daraj wa'l-daqā'iq = Mukhtaṣar risālat al-Raqā'iq fī ḥisāb al-daraj wa'l-daqā'iq; M2. of No 873
Zubda al-hay'a; A1.of No 692
Zubda al-ḥadāiq - Sharḥ ṭabaq al-manāṭiq wa-huwa ṣafḥa tu`rifu minhā taqāwim al-kawākib al-sab`a wa āla lawḥ al-ittiṣālāt = Nuzha al-ḥadāiq fī kayfiyyat ṣan`at al-āla al-musammāt bi ṭabaq al-manāṭiq; A5. of No 802
Zubdat al-a`māl fī `amal asṭurlāb al-shimāl; A1. of No 1267
Zubdat al-hay'a; A24. of No 606; Tbilisi (AS 534/1)
Zubdat al-ḥisāb; M1 of No 1320; M1. of No 0121; M1. of No 1225; M2. of No 1080
Zubdat al-idrāk fī hay'at al-aflāk; A11. of No 606
Zuḥal wa kura-yi thawābit; A2. of No 789
al-Zāhir fī'l-jabr; M7. of No 487
Ẓuhūr al-Thurayyā wa khafā' mā kāna wabiyya; A2. of No 1040